# The American Economic Review

VOLUME XXIV, NO. 2 — JUNE, 1934




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## ON THE STRUCTURE AND INERTIA OF PRICES[1]


**The wide speculative movements of the great basic commodities have given rise to a prevalent impression of correspondingly wide variations in supply and demand, and likewise in individual "costs of production," losing completely from sight the extraordinary secular consistency or inertia of price movements when viewed in broad perspective. The conclusion drawn from this investigation is that the benefits of technological improvement have spread rather evenly over most forms of production, and that in general prices tend to swing together in a remarkable degree. Therefore, that the main, long-term movements in the prices of most great basic commodities, or in commodity price indexes, have little or no discoverable consistent relation with the commodities themselves.**


### *I. A Concrete Example: Wheat*

It has been estimated that in the days of Washington and Jefferson and, indeed, up to about a century ago, the labor time for plowing, tilling and harvesting an average acre of wheat was above sixty hours. The soil was turned by a wooden plow, pulled by oxen; seeded by hand; covered by dragging a bunch of brush across the field; harvested with a sickle; threshed with a flail.[2] The average price of wheat in those days ranged around the traditional dollar to a dollar and a half. It was high through the Napoleonic wars, then very much lower.

Today the Agricultural Department estimates from concrete instances as, for example, some of the large farms in Kansas, that with the most modern equipment the same "field time" for raising and harvesting an acre of wheat is now not much over one hour. Of course the labor "field time" may now be less than half the actual cost of production, when one adds in the capital cost of the requisite machinery, interest charges, depreciation, etc. Nevertheless, the total average cost of producing a bushel of wheat, measured in terms of human effort, is possibly now not one-twentieth or one-thirtieth of what it was before the coming of the Age of Machinery.

In the meantime the total production of wheat has hugely increased.

[1] The larger part of the statistical work which forms the basis of this paper has been done by Miss Lucille Bagwell of the Reports Dept., Federal Reserve Bank of New York.

[2] *Cf.* a comprehensive survey by Leo Rogin: ***The Introduction of Farm Machinery and Its Relation to the Productivity of Labor during the Nineteenth Century***, University of California Press, 1931.

Its culture has spread all over the world, and to both hemispheres. It is now at least ten times what it was at the beginning of the nineteenth century, a slow, steady growth at the rate of something like 2 per cent per annum, compounded. Yet in spite of this colossal increase in product and this astonishing decrease in the labor cost, the average price of wheat in the last fifty years, or a hundred years, has not greatly differed from the average price through the preceding two centuries. Seemingly an astonishing paradox.

This is only part of the reality. Not only has the average *money* price of wheat, taken over sufficiently wide periods, say thirty to forty years, to allow for the vagaries of war finance and governmental currency frauds, shown little decline; but also the *relative* price of wheat, that is, the average annual price compared with the average of all commodities, has not, at least in Great Britain and the United States, varied greatly in a century for which we have accurate and definite knowledge. And this latter, even, in spite of wars and the usual imaginary "war demands" dear to the hearts of economists and amateur writers upon the subject.

And this is but an example. In a word, while the "real" costs of production, the total "labor time," for almost all commodities have decreased enormously, and the total product been multiplied often by scores if not hundreds of times (as in the case of things like rubber, copper, and countless others), neither the *money* price nor the *relative* price of the greater part of these commodities has shown any important long-time or secular change.

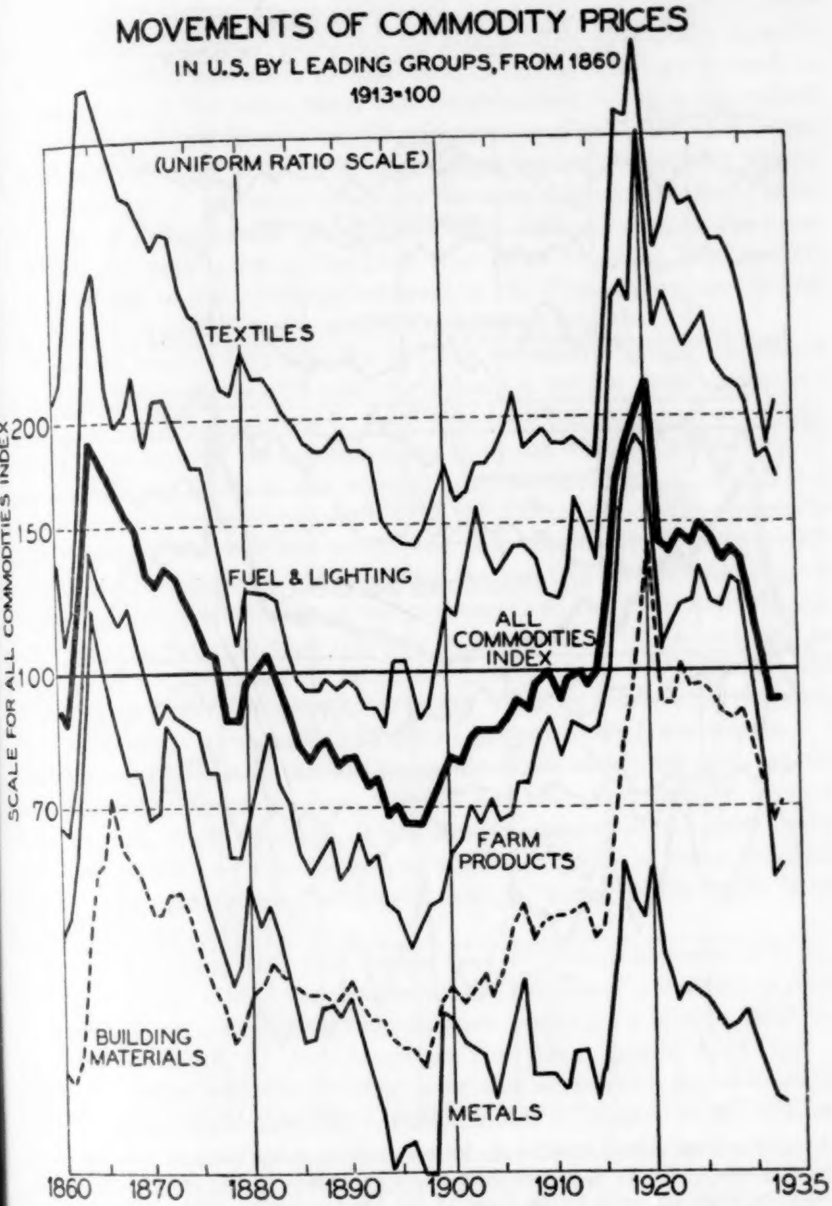
There are, of course, notable exceptions. Some prices, like metals and chemicals, have apparently been declining for the greater part of a century. When exceptional conditions arise, as in the case of the boll weevil and cotton, the price of a commodity, both relatively and in terms of money, will rise. But viewed in the perspective of a century or so the changes have been, for the most part, remarkably small. All of which is duly set forth and can be read almost at a glance in the extensive series of graphs which form the principal part of this article.

What can it all mean?

## *II. The Relativity of Prices*

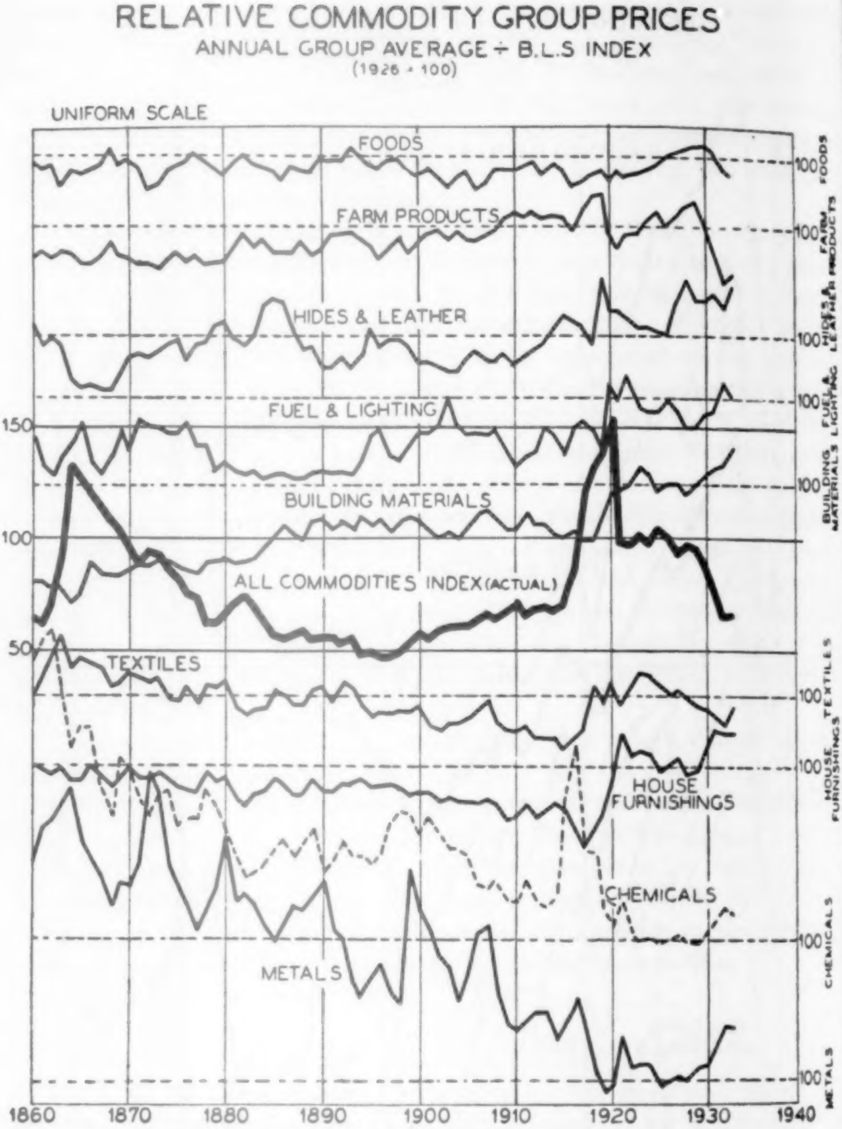
First, as to the evidence. In the first of the graphs is shown the familiar United States Bureau of Labor index of all commodities at wholesale, and with this five of the ten principal groups into which this index is divided. Each of the groups is plotted to the same scale as the composite, all-commodities index so that the movements of each are exactly comparable with each other, and with the composite. This carries the history of prices through two gigantic wars (our Civil War was, in point of numbers, the greatest known up to that time), with

CHART I




U. S. Department of Labor actual indexes of five of the leading groups of wholesale commodity prices compared with the all-commodity index, each line plotted on the same scale (shifted) as shown for the all-commodities index. 1913 = 100.

CHART II




Annual average comparisons of the all-commodities index (actual) with every major price group of the U. S. Department of Labor divided by the all-commodities index; uniform scale for each group same as for the composite; 1926 = 100, as indicated in the right-hand margin for the individual groups.

their usual attendant great inflations and deflations. In the earlier part of the period the prices are as registered in a greenback currency; from 1879 a "specie" currency, and from the late nineties practically in gold.

It will be noted how each group tends to rise and fall very much in the same way at the same time, and considerably to the same extent as that of the all-inclusive index. There are some minor relative changes.

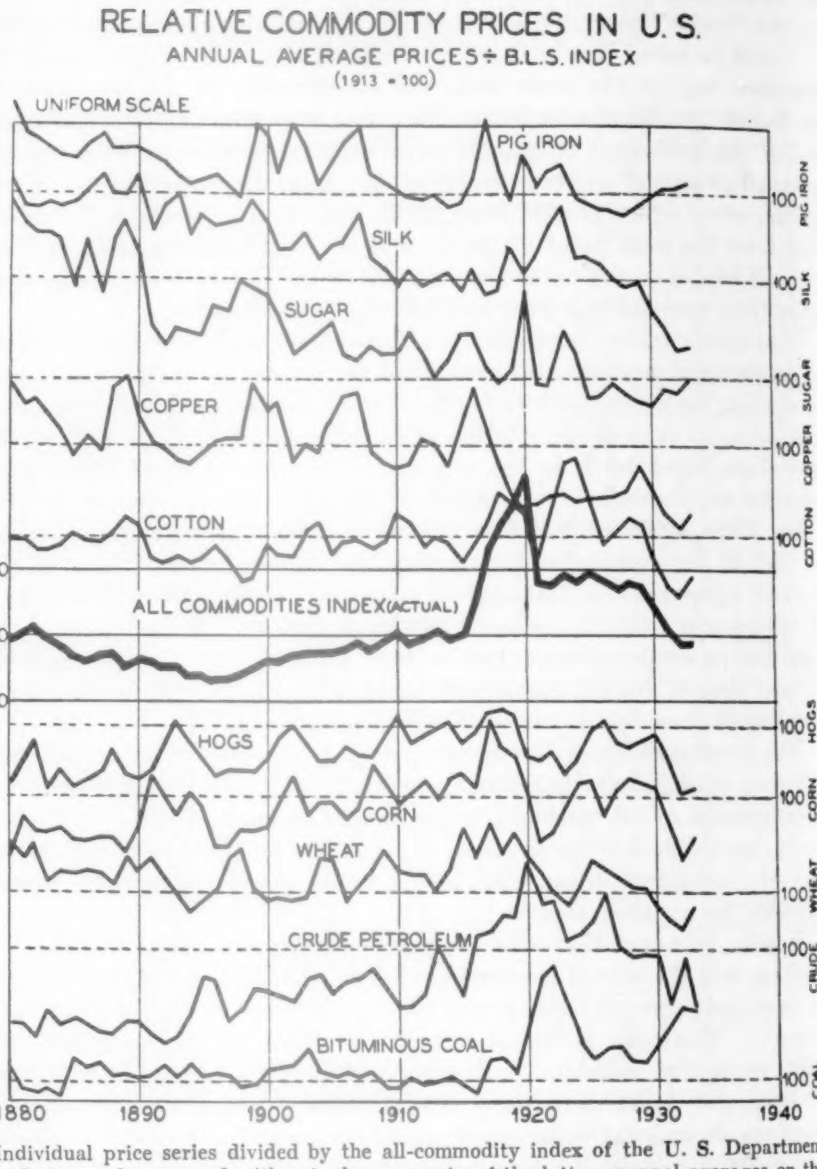
For the most part it is as if some single central force were acting upon all groups of prices in somewhat the same degree and effect. Most prices, after a violent rise from 1861, were falling much in the same way from the peak point of the Civil War down to about 1896 or '97, then all tended to rise up to the outbreak of the World War, and in and after that war violently rose and fell very much together.

This synchronism, or relativity, of price movements may be expressed in another and perhaps still more vivid fashion by the simple expedient of dividing the index numbers for each group by that of the all-commodities index, to express the relation of each to the whole. This method of procedure is set forth in the second graph, where nine of the group relatives are shown in comparison with the movements of the composite index. Here again each line is plotted individually to the same scale as that of the composite, thus giving the relative movements of each in exact comparison with the actual movements of the all-inclusive index. It will be seen that the majority of the groups show little tendency to long-time or secular change; two or three, the textiles, the chemicals, and metals, show a distinct downward trend. That is, relative to the combined index these latter tended to sell at progressively lower prices.

The most striking is the metals group from which our idea of the existence of a definite business "cycle" has been very largely derived. Most notable of all, perhaps, is the slender amount of movement relatively, up to the last three years, of wholesale prices of farm products and of foods, just those, curiously enough, about which there is invariably the greatest clamor.

It may be urged that this comparison of group movements is misleading, and the actual movements of the individual commodities must be immensely greater, the group indexes tending to give a false impression. This idea is tested out in the third graph, each line of relatives, again, individually drawn to the same scale as that of the all-commodity index shown here, for purposes of immediate comparison. Here are shown relative prices of ten of the great basic products which so largely dominate the movements of the index as a whole: cotton, wheat, coal, iron, etc. Here it is clear that the movements of individual prices are more irregular and more divergent than in the groups. But the tendency to a distinct secular trend is again absent in the majority of the series, in fact, some of them show relatively small movements over

CHART III




Individual price series divided by the all-commodity index of the U. S. Department of Labor and compared with actual movements of the latter; annual averages on the 1913 base; uniform scale the same throughout, with the different bases for individual commodities shown in the right-hand margin.

the greater part of the period. Two striking instances are the relative prices of bituminous coal, up to the remarkable period from 1919, and cotton up to the time of the boll weevil.

These are all prices in the United States. How do these relative movements compare with those of a great world market, like Great Britain?

In the fourth graph these relative movements are set forth in precisely the same way. The *relative* variations of each of ten great commodities are shown in comparison with the actual movements of the composite Sauerbeck index. Here the scale is a little more condensed, for which due allowance must be made. But in general it will be seen that there is the same lack of widely divergent trends, save in one or two instances. In some few the movements are so small that in a broad way an individual index as, for example, of wool, might almost be taken as a substitute for the composite index.

Here again it may be urged that these are average annual prices, and that the use of this annual average in turn tends to obscure the actual price movements from month to month, and the so-called "cyclical" movements. This is perfectly true, but this simply raises the question as to the economic significance and importance of the lesser current movements. It is chiefly speculators who buy when prices are rising, and sell when they are falling. These are rather the froth on the beer. Shrewd merchants and buyers tend to make their commitments for the most part when prices are relatively low, and to decrease their commitments as they rise.

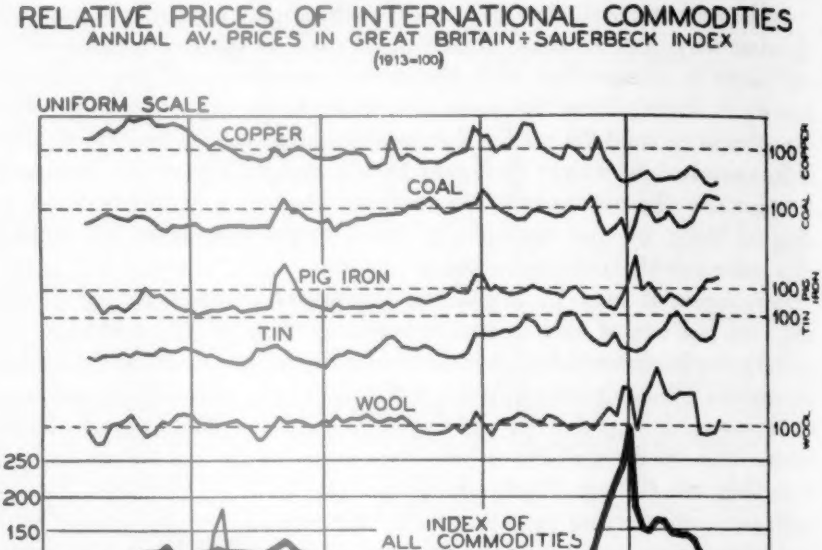
In one notable instance which was formerly available where comparisons of prices and purchases could be made, that of merchant pig iron in this country, it was shown that the great bulk of the purchases in any extended period of price rise was made in the first third of the period covering the total rise, falling to about half of this in the "middle" period, and still more in the last. The inevitable inference was that if we had accurate information as to what might be termed "bulk prices," that is, the proportion of a given commodity sold within a given price zone, the average of prices for all *sales* would be lower than the average of, let us say, the month to month quotations. All this may not be universally true, but the instance does tend to suggest that the extreme movements of commodity prices are of less significance, perhaps, than popular imagination has conceived.

Yet another fact may be noted. This is the prevalence of "futures" trading and hedge-selling in a great variety of industries. By this means the actual prices paid for commodities as they go into processing or consumption varies very much less than current quotations would suggest. Thus the miller, the cotton factor, the silk manufacturer, the maker

of shoes, and hundreds of other industries use this simple device to equalize the ups and downs of daily quotations.

It follows from all this, of course, that actual average sales prices, or final consumption prices, vary far less than one would dream from

CHART IV




Prices in Great Britain of ten leading commodities divided by the Sauerbeck index of all wholesale prices and compared with actual changes in the latter; annual averages on base 1913 = 100; uniform scale for each series, as shown for all commodities, with base-lines as indicated in the right-hand margin.

watching the gyrations of wheat or cotton and the like in the wheat pit, or the cotton exchange. Average prices, taken over a range of three to six months, or even a year, therefore, represent much more nearly the true prices of commodities than do the higglings of the daily quotations. Ordinarily there is little compulsion for the vendor to sell when his wares take a violent drop, any more than there is for the buyer to follow a vertiginous market upwards, when he has an abundant supply. It is because we have our eyes fixed on the wide oscillations shown by these daily quotations that we have come to think of commodity prices as so unstable. The reality seems quite different.

We may take it, therefore, that the picture here given of these relative prices is a just one, and that the significance of these relative movements is far greater than the actual week to week or month to month gyrations.

Now, it is clear that if all prices whatsoever could move up and down perfectly together, so that there would be no variations whatever in relative prices, only the long-time lender and borrower would be very much interested in the price question. This, of course, would mean, also, that prices of everything, wages, real estate, goods of all kinds, pictures, and the like, should move in perfect synchronism. All this is A-B-C.

If all this were actually true, and all prices did rise and fall together, then there would be none so naïve as to imagine this merely the chance resultant of a multitude of disparate factors affecting the commodities themselves. We might, indeed, hear the customary persiflage about "sympathetic" price movements, and all the like. But if the price of a corner lot in Market Street of San Francisco should, let us say, move in exact synchronism with that of phosphate rock in Florida, or of young lobsters in Maine, even this favorite imagery of the theorists might be permitted to sink into the desuetude where it belongs.

We should inevitably seek for some other factors or forces which could be revealed as impinging impartially upon everything, everywhere, of every description, that is bought or sold. But are we driven to such conclusion? Is it true that the relative scarcity or abundance, in a word the *variation* in supply, of goods and commodities in general has little effect upon their main long-term price movements? Are these effects largely confined to the short-time higglings already noted?

### *III. The Relation of Supply to Prices*

In textbooks upon the subject, it is commonly assumed that supply and demand are, to a large extent, relatively equal factors, and that the problem is largely solved by the mere statement of this magical formula. It is, of course, obvious that there is a tendency for the supply to adjust

to the demand and, in turn, the demand to the price; but the idea that the supply factor is largely passive, and that the predominant influence in the main movements of prices is on the demand side is, I think, caviar to most teachings upon the subject. Have not millions of words been written on the influence of the "cost of production" and its variations to the effect that here is the main determinant?

In the beginning we have seen that in the case of one of the world's most important commodities this "cost of production," in terms of human labor or human effort, may sink from 90 to 95 per cent, and both the relative and the actual price, in money, not materially change. How could such a paradox arise? Is it possible that there is here in reality no paradox save that which comes from our inveterate habit of thinking in formulæ instead of considering the simple facts?

Is it not evident that if the labor-time cost of producing wheat is reduced by 90 or 95 per cent, and the consumption of wheat tends to rise more or less with the general consumption of all kinds of commodities, then the relative price of wheat could not, over a century, remain much the same unless the "cost of production" of all other commodities had tended to decline almost synchronously and in almost the same degree? How could the relative fixity of prices and of great price groups continue, decennium after decennium, as it is clear that they do, on any other assumption?

But the actual prices of things do from time to time tend to rise and fall in a very considerable degree, that is to say, the general price level and the commodity price level do change, sometimes rising by a hundred per cent or more within a space of a few months. As in war time and after. Here it is agreed that there may be an enormous variation in the demand, with a relatively small variation in the supply, and probably, for the time being in "the cost of production."

This same rise or fall in the general price level or the commodity price level may take place slowly and continue over a long period of years. And this, as we find, in the face of any noteworthy change in the rate of growth of most world products. Clearly then, if most commodities tend to increase more or less together (but with differing secular trends), and their relative prices tend likewise to remain fairly constant, then a wide variation in the *general* level of prices can hardly be due to variations of "supply." And if this long-term tendency to rise and fall is so largely independent of the rate of increase of the product, then it would likewise seem that the variation in prices, the broad level of prices, cannot possibly be due to variations in the "costs of production," expressed in labor time.

Invention and technological improvement, we know from a variety of

sources, proceed at a quite amazingly even pace. I have elsewhere[8] shown reason to believe that in the United States the rate of this achievement, if we may so call it, has not sensibly varied, per capita, in any decennium in at least a century or more, a finding which, of course, many will agree is absurd, but nevertheless happens to be the conclusion from the most careful measures of the rate of increase of the total product, alike for this country and for the world, which we possess.

But "reasoning" about these matters we know is as vain as babbling to the sands of the sea. Has not the babble been going on now for a hundred years and more, without reaching any conclusive agreement upon most of these contested points? Is there nowhere available clinching, inescapable *proof*, of the same standard staple of all research and discussion in the physical sciences?

An attempt toward such proof is offered in the six charts which follow. Consider the nature of the data. We have, it is universally agreed, fairly good price data on all the various commodities, and therefore for their composites, extending back for a century or more, alike in this country and in Great Britain. For the most part, the price indexes, alike of the individual commodities and of the whole, are made up from frequent quotations, so that the annual averages, at least, impartially distributing the possible error, have a high degree of intrinsic probability. As to this there is, in general, agreement.

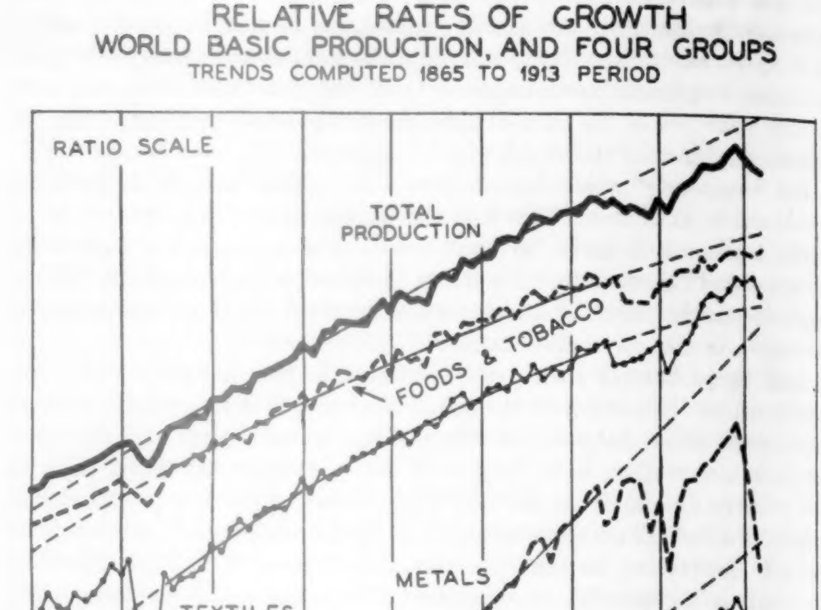
On the other side we have now a broad series of fairly good indexes of production of a wide variety of commodities, and it would seem, a sufficiently good sampling to make estimates of the rates of growth and the variation of production as a whole, at least in what we may term the basic commodities. This we may assume for a simple reason:

In the make-up of our price indexes we have progressively risen from the five or ten chief commodities which were included in the early indexes of Schuckburgh-Evelyn and his contemporaries, to the enormously inclusive and almost fantastic jumble represented by the present United States Bureau of Labor index, now over 700 separate series, everything from licorice drops and lycopodium to locomotives and liquid air. When now we compare a composite index made up of prices of forty or fifty of the chief products, with the movement of this very broad and highly representative composite, we find that while there may be some differences in the amplitude of movement, the general synchronism remains the same. We conclude, therefore, that the forty or fifty chief commodities comprise an adequate and representative sampling of the whole.

We can now do much the same thing for basic production, at least in the United States. There are now available annually estimates of pro-

[8] "Industrial Growth and Monetary Theory," *Economic Forum*, vol. i, 1933, p. 275.

CHART V




**Measures of aggregate world basic production (excluding Russia) and of the four groups comprising the total, with respective trends computed on 1865 to 1913 period, and extended according to these equations; all lines plotted on ratio scale, slightly shifted.**

duction in this country for some 200 or 250 highly representative and widely distributed types of products. From these we may devise a composite of various forms, weighted and unweighted, arithmetic or geometric. The results, it is interesting to note, are substantially not divergent, from whatever method is chosen—a most interesting conclusion which, however, might reasonably be expected, perhaps from the general tendency of production in all lines to rise and fall together.

When now we compare the composites derived from this very broad number of series, with an index made up from a relatively simple number, thirty to forty chief products, always provided that the index is not too heavily weighted with basic products, the result is very much the same, though with a slightly lower trend in recent years. Since we may now carry back production in a fairly representative number of series for over a century, we have, therefore, reason to believe that we have fairly reliable measures also on the supply side.

This is true alike for the principal basic products of the United States and also for the principal countries which we may group together into an index of what may be termed "world production," that is, of the ten or twenty nations which most largely contribute to the world's supply of goods, other than rice and a few other foods. All this, of course, is fairly new, and the validity and trustworthiness of these measures will be subject to the customary doubts of twenty or thirty years before they come to general acceptance.

If we take our indexes of production and plot them on the now familiar semi-log or ratio scale, we have a vivid and rational picture of the rates of growth such as is provided in no other way, since we may at a glance then compare the rates of increase from one decennium to the next. What we find, as I have elsewhere set forth in detail, is an astonishing continuity of growth, especially of the world product (up to the World War, and again up to 1929). Duly set forth in Chart V.

But with this we are not here concerned. It is obvious that the quantity of wheat and of other products produced in 1830 or 1880 has little to do with the price of these commodities, let us say, in 1930. It is the year to year variations that are important. Let us then take the variations of these quantities from this long-time trend, and plot these variations with the corresponding movements of prices. How now do these elements compare?

First, for the United States. On the horizontal line in the middle of Chart VI are shown these variations in production, in percentages from the long-term trend, and with this, on the same scale, the movement of the annual average prices of commodities at wholesale, in this country (B.L.S. Index). The relationship, or almost entire lack of consistent relationship, leaps to the eye.

Identically the same thing for world production. Here again a least-squares line is put through the annual data, the variations from this line taken in percentages and plotted as a horizontal line in Chart VII. With this is shown the Sauerbeck index of prices, taken as the most representative of what may be termed "world prices." The chart is carried

CHART VI

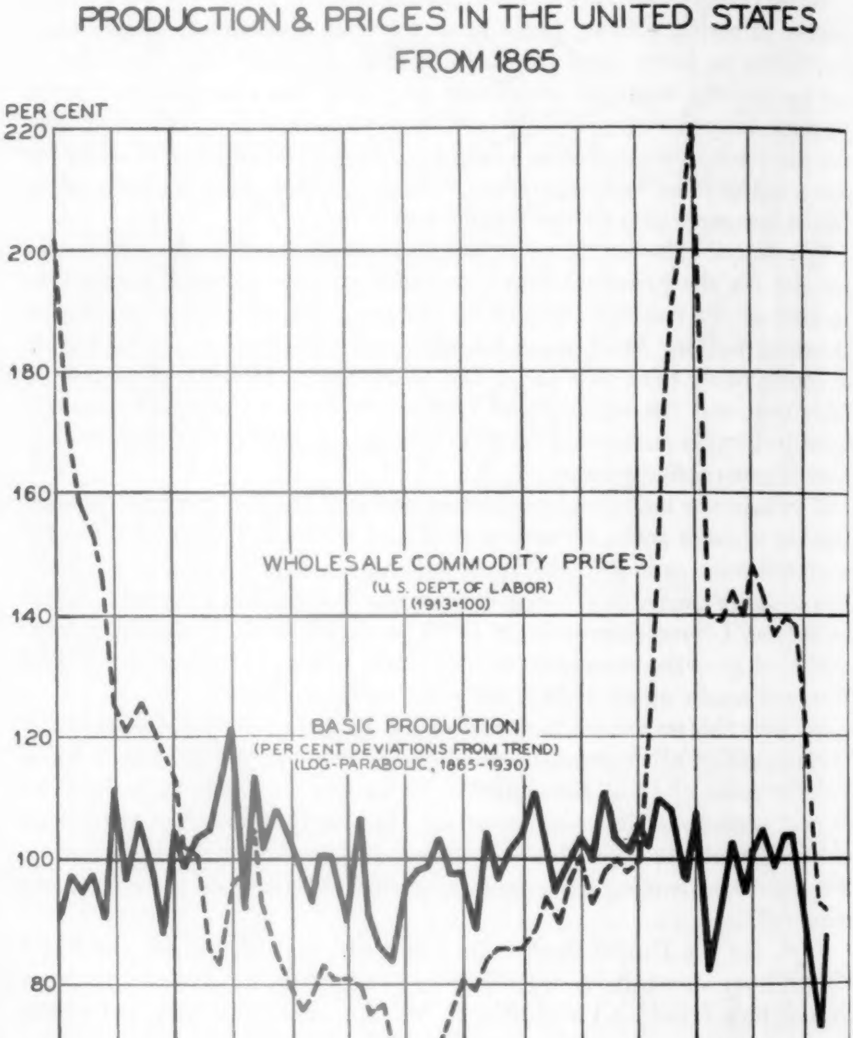
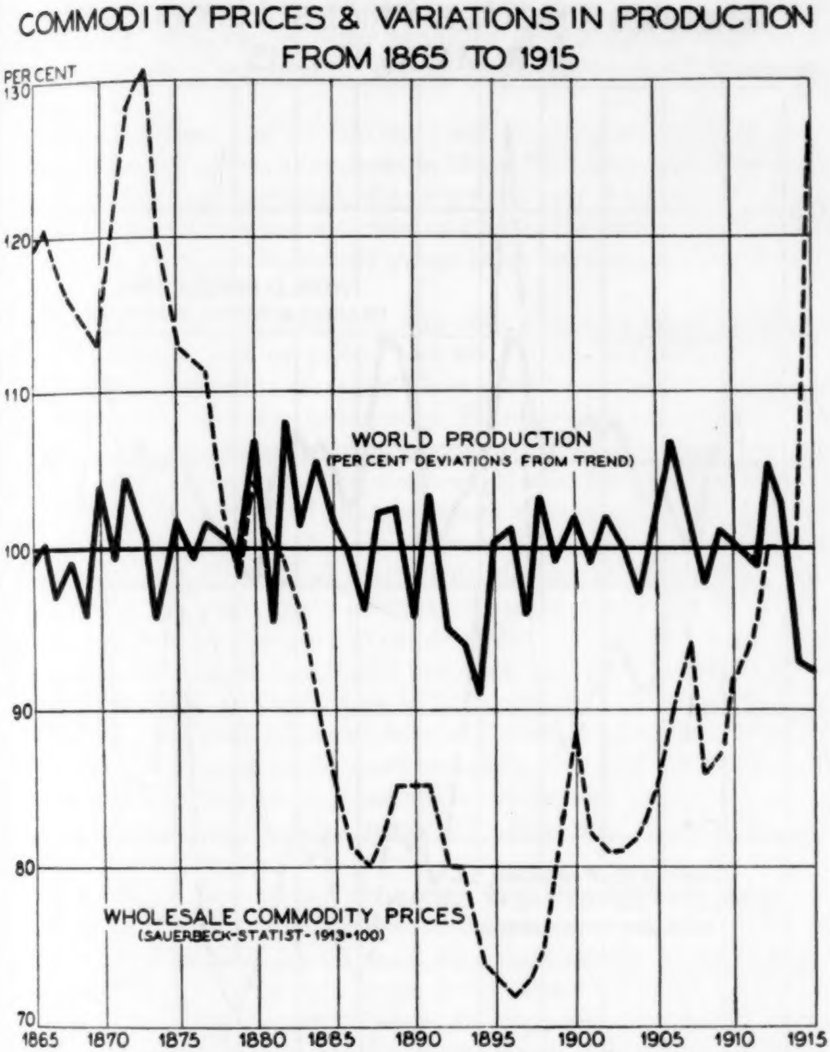


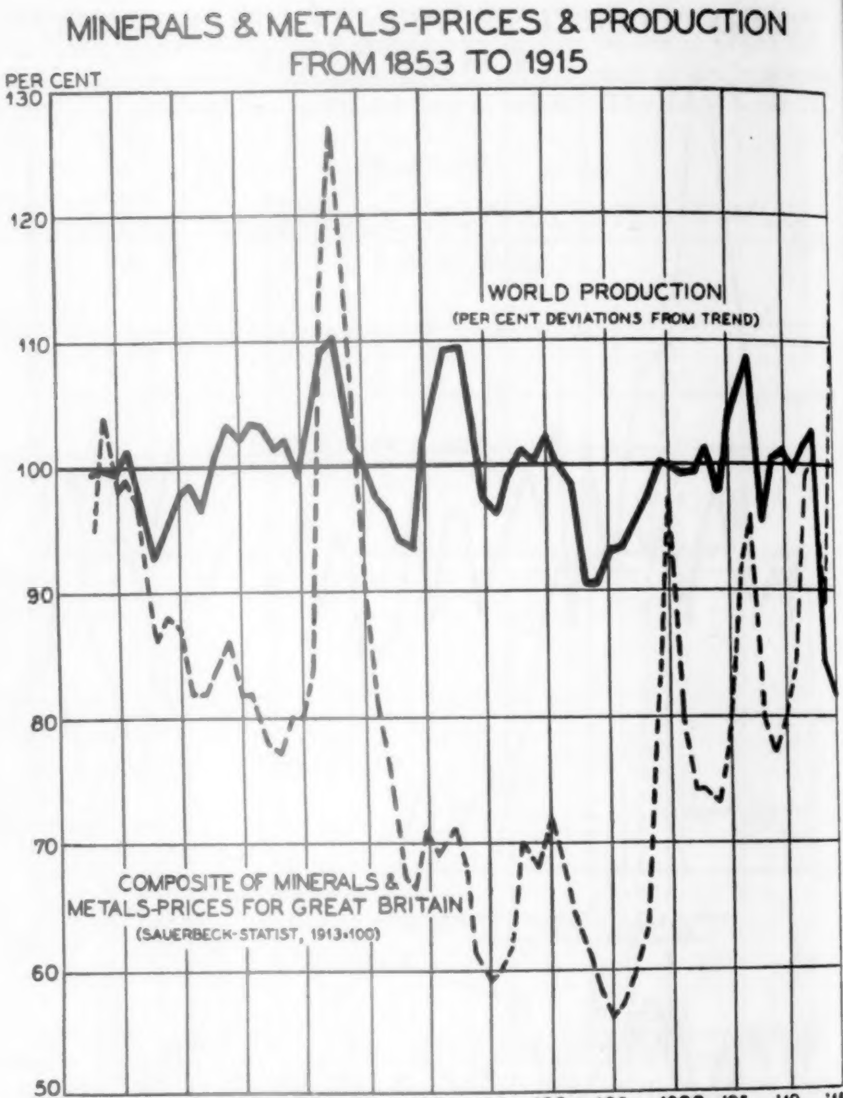
CHART VII




only to 1915, simply because the price movements in the next three years would have, on the same scale, gone off the map. Here again the same lack of consistent relationship, either positive or negative, between the variations of the product and prices.

It may be urged that we are here jumbling together two different sets of products and prices, in which the expected correlations are the inverse one of the other. It is held, and perfectly true, that in the case of food and soil products in general, the product has a high degree of

CHART VIII




inertia, largely independent of the demand and largely out of control of the producers. We should expect, therefore, between the variations of food and similar products an inverse relationship with prices while, on the other hand, with products subjected to immediate and direct control, as the production of metals, fuel and the like, the correlation,

if it exists, would be positive. This is to say that the price of iron tends to rise as the volume of the product increases, in response to an increasing demand, while, on the other hand, the price of wheat tends to fall as the volume is in excess of the normal or customary and largely inelastic demand.

This is obvious, and we therefore take world production of metals alone with metal prices, as is shown in Chart VIII. Here again the variations from the long-time trend, of a very rapid rate of growth, are plotted on the horizontal line, and with this, on exactly the same scale, the variations in the price, the Sauerbeck group index for metals. With the same results.

However, it may be said, this is dealing with very broad composites alike of product and of prices, and much that is significant may be buried under these wide averages. These considerations are relevant and in such matters always to be regarded. Therefore, let us take some highly representative individual product wherein adequate data exist, and pursue the same paths. We have measures of world production of wheat since about 1873. Back of that, estimates may be made, but they have not here been utilized. The wheat product has grown, decennium by decennium, with the same characteristic, decrescent rate as that shown by most of the great basic products. From a slowly decrescent trend of growth we take the percentage deviation in the usual fashion, plot these deviations on the horizontal line shown in Chart IX, and with this we plot the price of wheat, first in Liverpool up to the opening of the World War, as most representative of the world price, and from 1914 the price in Chicago, as the most representative gold price obtainable. Again the same results. Between the variations of the supply and the main movements of the price there is, it will be seen, practically no discoverable relationship.

Fairly conclusive, so far as it goes. But here again we are dealing with a world product, coming from many countries, on either side of the equator, and subject, let us agree, to a vast variety of conflicting influences. Why not take some single great commodity almost exclusively produced in a single country, where the supposed relationship between price and supply may be more clearly traced? For this it happens we have an ideal example, *viz.*, American cotton. This, as is well known, requires a special type of machines for its utilization; other lengths of cotton fibre cannot be easily employed. In other words, the possibilities of substitution are not great. Again we take our cotton figures, here from the earliest date after recovery from the devastating effects of our Civil War. Here again we find the same consistent, definite trend of increase in product. From this trend we take the percentage deviations and

plot these upon the horizontal line in Chart X, and therewith the annual average price of American cotton. Same result.

From all of which we may deduce this general corollary, or law: *The main, long-term movements in the prices of most great basic commodities, or in commodity price indexes, have little or no discoverable consistent relation with the commodities themselves.*

CHART IX

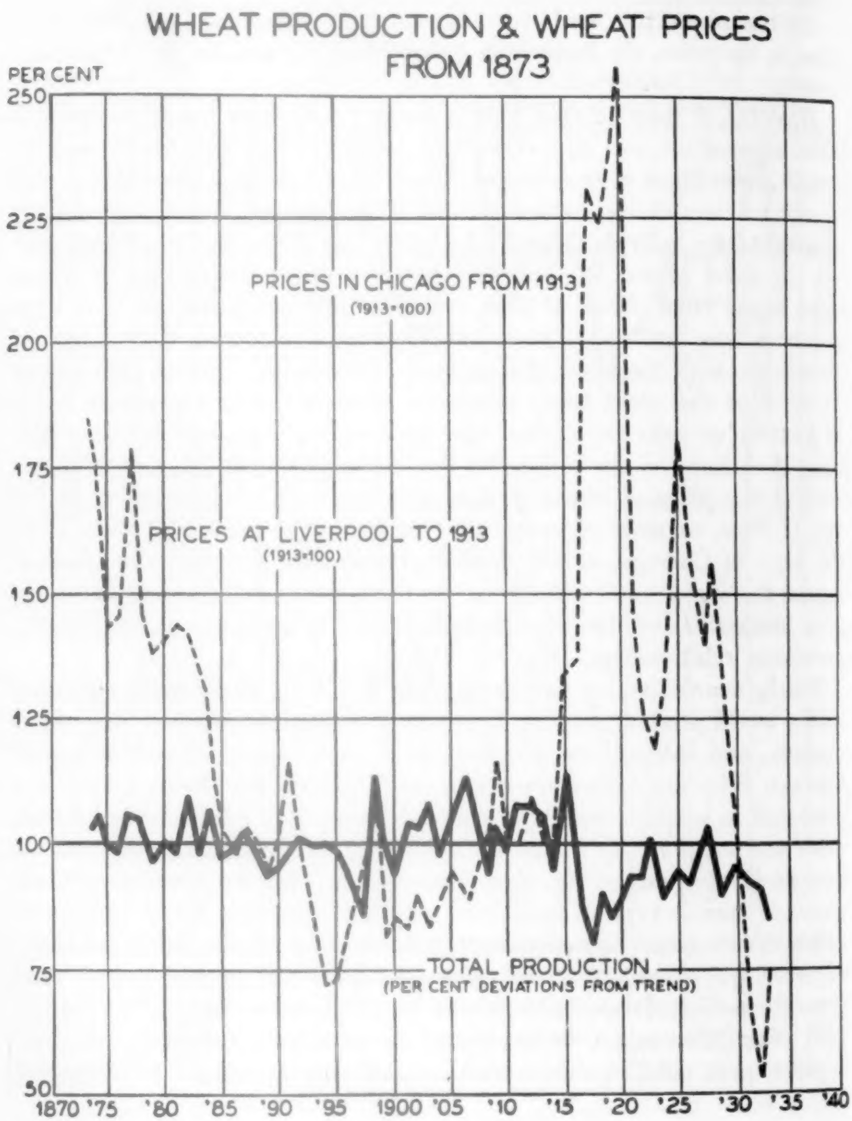
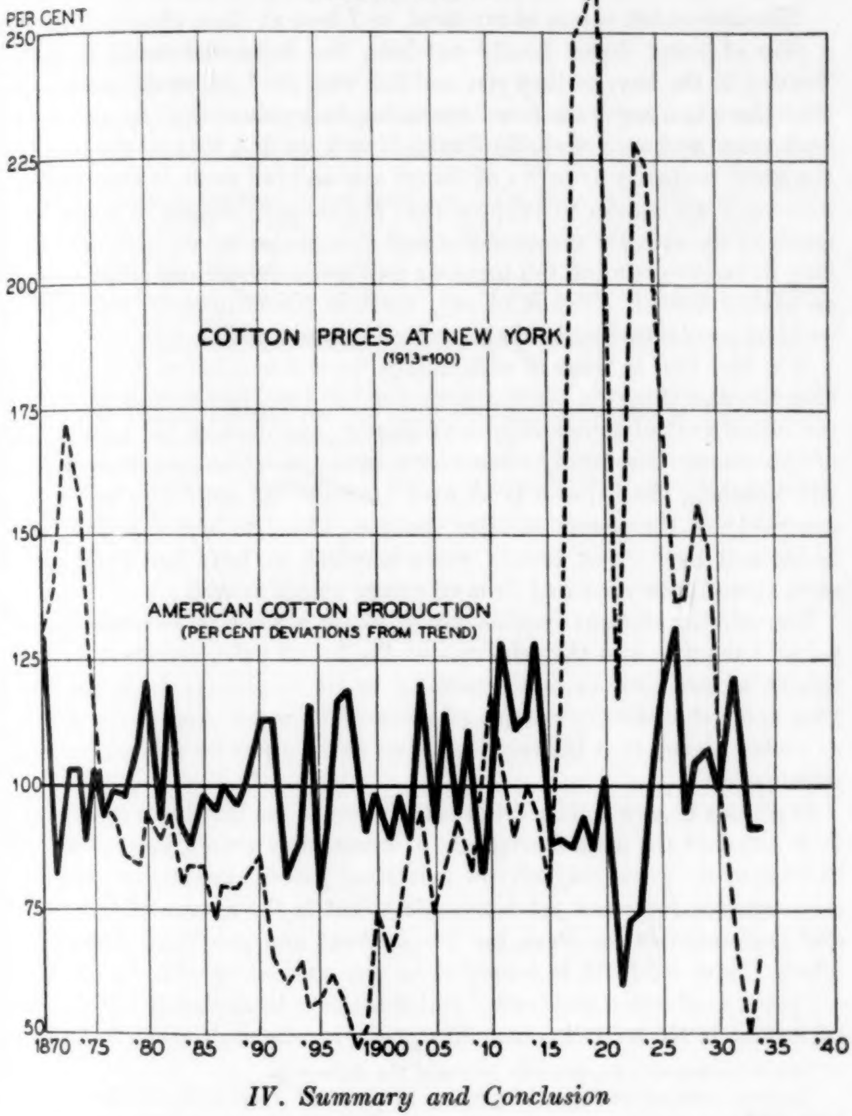


CHART X

VARIATIONS IN AMERICAN COTTON PRODUCTION AND ANNUAL COTTON PRICES FROM 1870




## *IV. Summary and Conclusion*

To sum up: What have we found? First of all that there appears to be a curious constancy of relationships in the prices, alike of broad groups and even of the majority of individual prices. This can be ex-

plained, it seems to the writer, only on the idea that there exists a fairly definite Structure of Prices—that the level of relative prices tends to fluctuate about a kind of norm, and that over long periods these norms maintain a quite astonishing degree of stability, vis-à-vis one another, and likewise to the broad average of commodity prices.

The simile that comes to my mind, as I look at these charts, is that of a ship of many decks. Lazily watching the decks and masts of a ship floating in the bay, as they rise and fall with the tide, we do not imagine that there is a separate force operating to produce the rise and fall of each mast and each deck. Similarly, if now we find that in the long run the great majority of prices of things rise and fall more or less together, we have little reason to suppose that the larger changes in prices have much to do with the commodities and things themselves. The fact that they do tend to rise and fall together is in many discussions either ignored or tacitly denied. That is to say, there is the customary reference to costs of production or to the "laws" of demand and supply.

The fact that in times of wide change the rise and fall of different commodities and things is often uneven, for the time, has seemed to obscure the broad fact of a high degree of inertia, and likewise the implications of this inertia. Especially when we are in the midst of such wide changes and watching the process from week to week and month to month, the generality of the change is often obscure. This has been especially true in the last eighteen or twenty years in which we have had perhaps the most tumultuous rises and falls of prices within record.

Second, the obvious implication of these studies is buttressed by a parallel inquiry into the relations of the broad price movements to the volume of production, and especially to its variations from the long-time and astonishingly persistent rates of increase. And the finding is, as stated above, that between these two there seems no clear, consistent relationship.

If all this be now solidly established, what is the inevitable conclusion? Is it not that the main movements of commodity prices, in general, and likewise of the great majority of individual prices, are due to some outside, external force not yet disclosed? What is the nature of this force, and the statistical evidence for its constant and practically invariable effect, I have set forth in a number of papers dealing with the relations of credit, production and trade.[4] But these have to do mainly not with the variations in the level of commodity prices at wholesale alone, but with a

[4] Among numerous papers may be noted the following:

"A New Index of the General Price Level from 1875," *Jour. of the Am. Stat. Assoc.*, June, 1924.

"A New Clearings Index of Business for 50 Years," *Jour. of the Am. Stat. Assoc.*, Sept., 1924.

much broader and more inclusive index of all kinds of prices, which I have called the General Price Level. If all this work is adequate, and solidly grounded, there remains then only to determine what are the relations of commodity prices as a whole and therefore also, as we have found, of individual prices (in the long run) to the General Price Level.

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"Deposits Activity as a Measure of Business Activity," *Rev. of Econ. Stat.*, Oct., 1924.

"New Measures in the Equation of Exchange," *Am. Econ. Rev.*, Dec., 1924.

"The Measure of the General Price Level," *Rev. of Econ. Stat.*, Feb., 1928.

"New Measures of the Relations of Credit and Trade," *Proc.* of the Acad. of Pol. Sci., meeting Nov. 22, 1929, New York.

"Overproduction and Business Cycles," *Proc.* of the Acad. of Pol. Sci., meeting April 24, 1931, New York.

"The Index of the Volume of Trade: Third Revision," *Jour. of the Am. Stat. Assoc.*, Dec., 1931.

"The Concept of Momentum and Inertia in Economics," Am. Assoc. for the Advancement of Science, meeting Dec. 27, 1932; pub. in *Stabilization of Employment*, Principia Press, Bloomington, Indiana, 1933.

"Industrial Growth and Monetary Theory," *Econ. Forum*, Summer, 1933, New York.

"New Measurements of Trade and of Economic Growth," *Rev. de L'Inst. Internat. de Stat.*, Jan., 1934.

# CURRENCY INFLATION: ITS NATURE AND IMPLICATIONS

1. Due to the lack of a widely accepted definition of currency inflation, the literature dealing with the subject is marked by a high degree of futility because of the inconsistencies, vagaries, and irrelevancies involved. The purpose of this article is to provide a useful definition of inflation, to examine its implications, and to apply the definition to the various currency schemes popularly associated with inflation, in order to determine whether they are really inflationary according to the terms of the definition.

2. Inflation is defined as "a condition resulting from an extension of purchasing power, either in the form of money or credit, which is not secured by a sufficient amount of reserves or commodities to liquidate it." A distinction is drawn between an inflationary procedure and the extent of inflation. Inflation is not treated as being synonymous with rising prices, and it is held that there is no such thing as gold inflation. Deflation, as a process, is looked upon as the converse of inflation, but not as a measure of the preceding inflation. It is held that the extent of inflation is best measured by the losses which may be attributed to the inflationary process and that these losses occur during both the inflationary and deflationary processes.

3. A rise in the price level accompanying a normal business recovery is quite different in final results from a rise in the price level caused by currency inflation. No reliable evidence may be offered in support of the contentions of the advocates of "controlled inflation."

4. The author contends (a) that the issue of fiat money is an inflationary procedure, (b) that the issue of government bonds may or may not be, (c) that open market purchases by federal reserve banks cannot be inflationary unless member banks and their borrowers are disposed to expand their lending and borrowing, respectively, (d) that the purchase of securities on the margin is inflationary, (e) that all installment purchasing is an inflationary process, (f) that devaluation of the monetary unit is not an inflationary procedure, and (g) that the attempt to do something for silver by means of reintroducing bimetallism, or otherwise, is not a question of currency inflation.

No reader of the literature on currency inflation can fail to be impressed with the great variety and vagueness of meanings attached to the words "inflation" and "deflation." There is no universally accepted meaning of the terms, and relatively few serious attempts have been made to provide precise definitions of them. In most instances in which the terms are used, either with or without definition, there is rarely a thorough-going examination of their implications, with the result that the literature on currency inflation is saturated with inconsistencies and superficialities.

Any definition of inflation and deflation, to be useful, must lead to important distinctions and conclusions. If inflation is not to be distinguished from a rising price level, or deflation from a falling price level, then economists should agree on this point and use the terms accordingly. A scrutiny of the various uses of the terms and of the analyses and implications found in the more thoughtful discussions of inflation will reveal that there are certain widely accepted connotations, perhaps more frequently implied than stated with precision, that should be recognized in definitions of the terms if they are to bear up under searching analysis and attain anything like general acceptability.

For example, it seems safe to hold that the most penetrating and consistent users of the terms maintain that a changing price level is one thing and that inflation or deflation is another; that a rising price level may bring certain economic maladjustments or readjustments, but that inflation prepares the way for disasters; and that a general deflation is a widespread and enforced liquidation which may cause, be caused by, or accompany a falling price level, but that a price level may fall for other reasons. It is also widely held that a rise in the price level, accompanying a general recovery from a depression, is desirable and can come about without currency inflation, thus implying that a rise in the price level is one thing and inflation is another. In a similar manner, a rise in the price level up to a certain point—to a state of full economic recovery or economic equilibrium—is thought of as a healthy recovery, and a rise above this point is often held to be inflationary, although the reason for the distinction is rarely set forth clearly. All writers would undoubtedly hold that the issue of fiat money is an inflationary procedure.

There are some fundamental ideas in these commonly accepted connotations of the terms inflation and deflation which should be incorporated in a useful definition. But in addition, a good definition should provide other distinctions also vital and useful in their practical application.

The following definition of inflation may be applied with consistency: *Inflation is a condition resulting from an extension of purchasing power, either in the form of money or credit, which is not secured by a sufficient amount of reserves or commodities to liquidate it.* Any inflationary *procedure* which leads to a *condition* of inflation is to be distinguished from the *extent* or *degree* of inflation which is measured by the losses resulting from that inflationary procedure. A multitude of measures or factors can be inflationary; but whether actual inflation is taking, or has taken, place is determined by the losses that are certain to be, or have already been, experienced. For example, fiat money, or credit, which is not adequately secured, may enter circulation and represent an inflationary process, but a change in circumstances—such as a country's rapidly growing up to its new currency, or obtaining the necessary backing for the currency, or when the inadequate collateral underlying the credit appreciates in value sufficiently to liquidate the loan without loss—may make unnecessary the absorption of any losses, with the result that an inflationary process does not culminate in actual inflation. Monetary measures, which are clearly inflationary in nature sometimes become innocuous because of offsetting factors. For this reason it is necessary to distinguish an inflationary procedure from inflation as a fact—that is, from the extent or degree of inflation.

In attempting to measure the extent of inflation, there appears to be no better way than by measuring the losses resulting from the inflationary procedure. It is, of course, easier to measure them after they have become matters of history than it is to forecast what they are likely to be when inflation is taking place. Nevertheless, the facts of inflation are not entirely matters of hindsight, even when we consider that common and elusive type of inflation generated by the over-extension of bank credit. Available business and currency indices have improved sufficiently in recent years to enable us to determine with a high degree of certainty not only the fact that the currency or credit is being inflated, but also the point at which general inflation begins to show itself and its approximate extent. For example, we are learning rapidly with respect to many of our most important industries what constitutes for them a normal maximum productive capacity in the face of a normal demand. We know that when our industries are all running at this normal maximum capacity, when goods are moving smoothly through the channels of trade, when inventories are not accumulating abnormally, when unemployment is reduced to the normal minimum, when prices have reached a steady level, gently oscillating up and down within narrow limits, when the net product of society is distributed among the factors of production in a manner that prevents a noticeable maldistribution of income—that is when there is the proper balance between expenditures for consumers' and producers' goods and between wages and profits—we have a state of economic equilibrium and a condition the most closely akin to an ideal that can be attained in our economic society. If such a society had emerged from a business depression, it would be in a state of full economic recovery. In fact, a condition of full economic recovery following a depression is synonymous with a state of economic equilibrium.

If, after such an ideal state of affairs is attained, credit expansion should continue, as it usually does because of the easy extension of bank credit fostered by the profit-making incentives of commercial bankers, business enters a boom period. Prices rise, production schedules are speeded up; inventories accumulate above their normal levels; goods cease to move smoothly through the channels of trade; wages are bid up by competing employers without further reducing unemployment or without increasing the efficiency of the employees; maldistribution of income begins to show itself in various ways; too large a proportion of the net product of industry finds its way into capital investment and too small a proportion is spent for consumers' goods with the result that there is overproduction and underconsumption of goods; installment selling increases, and the ground is prepared in a multitude of ways for the inevitable collapse. Economists have learned to interpret these signals

as indications of credit inflation. They know, also, that when liquidation begins, much of the purchasing power will prove to be inadequately secured and that many losses will be sustained, by creditors, by debtors in an effort to meet their obligations, by laborers and by many another innocent bystander. That losses will be sustained becomes clear while the inflation is in process; but their extent cannot be foretold, for the reason that a liquidation may degenerate into a panic in which properties are tossed overboard for a mere fraction of what they are worth in anything like normal times. Or, what promises to be a thorough-going liquidation may be arrested in its course by some fortuitous circumstance such as a war, or invention, or discovery having far-reaching economic significance.

The losses which are sustained as a result of inflation, and which are *in general* the best known measure of it, may be due to the economic maladjustments accompanying rising prices as well as to the losses experienced during a period of liquidation. For example, a rise of prices brought about, let us say, after a depression by the issue of fiat money, reveals characteristics quite different from those associated with a normal recovery in business. The mere announcement of the issue of fiat money, or of the proposal to issue it, creates a psychological reaction on the part of both buyers and sellers that generates a condition of inflation. Buyers, fearing that their savings will purchase progressively less, rush to convert them into consumable goods and into property which they hope will appreciate in value. They engage in this hasty purchasing not because they have received an increase in their purchasing power, but in an effort to save their incomes, in so far as they are able, from the despoiling effects of currency inflation. They buy because of *fear* and not because of increased confidence which accompanies a normal recovery in business. Such hasty buying reduces the surpluses available for future spending; and, unless buyers find new sources of income, prices will tend to fall.

Sellers, anticipating a depreciation of the currency, raise their asking and selling prices, and show an increased reluctance to sell except at prices which they think will enable them to replace their stocks profitably under conditions of steadily rising prices. This reluctance of sellers to sell, except at increasing prices, combined with the hasty, fearful purchasing on the part of buyers, creates the conditions that generate rapidly rising prices under the stimulus of fiat money or any form of currency inflation.

Under conditions of rising prices generated by currency inflation, the economic readjustments and losses which occur are not merely those associated with a sound rise in prices growing out of a normal recovery in business; they are more accentuated and also different. There is a

pronounced lag in wages and salaries under conditions of inflation; production does not expand in the usual way for the reason that many producers find it more profitable to speculate and gamble rather than to attempt to lay plans for carrying on production over a period of time marked by unusual uncertainties. Employment is not as great, therefore, as during a rise in prices associated with a normal recovery. Fearful and hasty buying during the period of inflation, combined with a lag in purchasing power of consumers, soon sends the great mass of people headlong on the road to poverty, distress, and destruction.

There are only two alternatives for a country once it starts to inflate its currency: (1) stop further inflation and thus precipitate a liquidation, or (2) continue to inflate until the currency becomes worthless in order to avoid a liquidation. Inflated prices tend to collapse unless there is always present the promise of further inflation. Any sign of curtailment in the currency issues reverses the psychological reactions of buyers and sellers. The buyers lose their fear of increasing prices, tend to withhold further purchases, and may become sellers. The sellers cease raising their prices and, being doubtful of the future, tend to dump their goods on the market as rapidly as possible, even at a loss. This anxiety of sellers to sell, combined with a reluctance of buyers to buy, precipitates a liquidation, or a tendency toward liquidation, the degree being determined by the extent of the fear. If the fear becomes widespread, the liquidation becomes precipitate and far-reaching; and no government can stop it. Any hesitation in continuing the inflation, once the psychological conditions associated with it have been generated, will result in some reaction. If, therefore, a country wishes to avoid the severe losses associated with liquidation, once it embarks upon a program of currency inflation, it must continue to inflate to the bitter end as did Germany. The losses from, and attributable to, fiat money inflation are, therefore, those which result from the steadily declining and dissipated purchasing power of consumers during rising prices, and those which are experienced by all who suffer during liquidation if liquidation takes place.

It seems clear that an attempt to raise the price level, with or without the conscious purpose of restoring economic equilibrium, by means of currency inflation generates forces that make it impossible for the economic system to reach a state of full recovery and then remain there. This is because prices, in response to the inflationary stimulus, tend to rise more rapidly than the actual amount of money and credit in circulation would justify—that is, in anticipation of the appearance of more purchasing power—and unless the anticipated additional currency appears, these prices will collapse. Furthermore, the normal reactions of rational business men make impossible the maintenance of such an

"equilibrium." So long as prices are rising toward what is conceived, in advance, to be the price level at which equilibrium will be attained, there is a reluctance of sellers to sell, except at progressively higher prices, and a rush of buyers to buy before prices rise to the supposed point of equilibrium. Then, when such a price level is reached, there is a reversal of attitudes: sellers become anxious to sell and proceed to dump their goods on the markets; buyers become reluctant to buy, and the result is a fall in prices and a widespread liquidation which no government can stop. For these reasons the advocates of "controlled inflation" find themselves on the defensive, and offer arguments, rather than evidence based upon past experiences, in support of their contentions. It should be emphasized that whereas an attempt to restore economic equilibrium by means of inflation generates conditions which make it impossible to maintain that equilibrium or to avoid an aftermath of liquidation and losses, full recovery by normal processes may not lead to liquidation. Only a most superficial observer insists that there are no fundamental differences in the two methods of obtaining business recovery. And yet this is the very point which a great many supporters of inflationary measures do not see; they fail to realize that the alternative to a rise in prices generated by inflationary measures is not further deflation, but a sound rise in prices resting upon a sound recovery in business.

The losses which result from inflation, and which are *in general* the best measures of it, are experienced—if we may repeat—during both rising and falling prices. The periods of rising prices generated by inflation are of two sorts: (a) the period preceding a crisis and liquidation, and (b) the period which continues until the value of the currency reaches a very low point, if not zero. During both periods of rising prices, the losses are sustained by all those who have fixed incomes and by those whose expenses rise relatively more rapidly than the purchasing power of their net incomes. If the period of rising prices is relatively short and is followed by a liquidation, it is quite probable—especially if the rise in prices is moderate—that the losses experienced will be relatively small and that most of them will be absorbed during the aftermath of liquidation. If the rise of prices continues for a relatively long period and to extreme heights, the purchasing power of the great majority of people steadily lags, and the masses become progressively more poverty stricken. Even the property owners and speculators who, for a while, are able to protect themselves, if not profit, from the inflation, are likely to be carried down in the end, since their rapidly rising expenses and costs of living finally compel them to sell their property in order to live.

In general, nearly everyone is caught in the meshes of extreme inflation. As an illustration of the nature and amount of losses incurred dur-

ing this kind of inflation, one needs only to look at the experiences of the people of Germany, Russia, Austria, and other countries during and after the World War for ample evidence of how the masses suffer losses through such a period. When the final collapse does come, as it came, for example, to Germany, the additional losses incurred following the ultimate collapse of the currency are not very great because they have already been largely absorbed—steadily and progressively by the great mass of people.

During the period of business recession and liquidation following the typical crisis, the losses fall with abruptness on all property owners, who find the values of their property—securities, inventories, dwellings, factories, etc.—depreciating rapidly; on creditors who are not paid; on debtors who are forced to sell at losses in an effort to pay their debts; on employees who lose their jobs or have their wages or salaries cut more radically than the drop in their cost of living; and on most profit-makers. Indeed, hardly anyone can escape the effects of a widespread liquidation; and it should not be forgotten that such a liquidation is caused by a preceding inflation.

The fact that losses caused by inflation occur during both a period of rising prices and a period of falling prices is worthy of emphasis for another reason. Many people look upon deflation (to be defined below) as the exact converse of inflation and as the real measure of the losses due to inflation. Although it is substantially correct to hold that deflation is the converse of inflation, one is not justified in supposing that deflation is at any time more than a very rough measure of the preceding inflation. Even then such a supposition would have its greatest validity only when the inflation is a bank credit inflation—a deposit currency inflation. Reserve requirements invariably place limits upon such inflation and force a liquidation and a collapse of prices, with the result that deflation is certain to follow. Since this type of inflation has been most common in this country, we have been prone to look upon deflation not only as the converse of the preceding inflation, but as the most tangible measure of it. We must remember that deflation is only a partial measure of the preceding inflation. Other reasons why the losses experienced during a period of deflation are not an accurate measure of the preceding inflation are given in connection with our discussion of deflation below.

Inflation of money or credit is a condition that may apply to individuals or to groups of individuals as well as to society as a whole. We seem to take cognizance of inflation as a social problem only when our economic system becomes involved, although reflection should speedily convince us that our society is, after all, composed of individuals; and it is only because a great number of individuals is involved that the eco-

nomic system is involved. When any individual obtains a loan from his bank or from some other source, and later finds he cannot repay the loan, he has had a purchasing power in excess of what he should have had by the amount of the loss sustained by the bank or other lender. To the extent that the loan is not secured by reserves or collateral that will liquidate it, the bank or other lender suffers a loss, and this is the measure of the inflation which has taken place in so far as this individual is concerned. This sort of over-lending is taking place at all times, regardless of whether the price level is moving upward or downward. But it is only when a great number of individuals is found in this position that the problem is popularly looked upon as one of great social significance. During rising prices, when optimism becomes general, there is a pronounced tendency for banks and other lenders to lend too freely and for business men and others to borrow too much, with the result that, when the business machine gets into a jam, the great mass of borrowers find they have over-extended themselves, and liquidation sets in, accompanied by the resultant losses. Thus, some inflation is always taking place regardless of what the price level is doing, although inflation is doubtless more common when the price level is rising. In a similar manner, deflation applies to an individual, a group of individuals, or to the great mass of people; and some deflation is always taking place regardless of the behavior of the price level, although deflation is most common when the price level is falling rapidly.

A price level can rise for a multitude of reasons, of which general inflation may be one. A price level can fall for a multitude of reasons, of which general deflation may be one—or it may be a result of falling prices. And inflation or deflation can take place to some degree regardless of the behavior of the price level. General inflation can take place under a steady or falling price level, the obvious point being that the price level would fall, or would fall more rapidly, if inflation did not exist.

That inflation is not synonymous with a rising price level, can be demonstrated by other illustrations. It may be that gold certificates or gold-secured federal reserve notes are entering circulation, or that bank deposits and bank reserves are expanding as a consequence of gold importations or gold mined, with the result that the price level rises. Since the money and credit entering circulation are fully secured and self-liquidating in nature, there can be no question as to their capacity to sustain the additional purchasing power added to the circulation. No debts are created that are not fully secured and fully self-liquidating. Surely a rise in the price level brought about by the increase of such currency is radically different from one brought about by a currency based upon inadequate reserves or collateral which cannot liquidate it.

For this reason one should not speak of a gold inflation, but of an increased amount of gold in circulation. Or, prices can rise due to a general scarcity of goods; and this would not be a case of inflation, provided all currency is self-liquidating. Conversely, the price level can fall because of a relative increase in goods to be sold, either as a result of a country's loss of gold or as a result of an increasing production of goods (perhaps at declining costs); and such a steady, though persistent, fall could occur without a deflation which characterizes the sudden and enforced liquidation following a period of inflation.

We have frequently spoken of deflation without defining it. The following definition appears to be a useful one: *Deflation is a condition which exists when liquidation takes place—either as the result of pressure from creditors or because of fear—in an effort to meet obligations or to forestall or minimize losses.* In general, deflation *as a process* is held to be the converse of inflation; and considered etymologically, this point of view is defensible. But it is much easier to define deflation as a process than to define its limits at any particular time. For example, it is widely recognized that in time of severe liquidation panic frequently seizes people, and they sell property at a mere fraction of what it would bring even in depression times. Is this rash destruction of property values, commonly called excessive deflation or excessive liquidation, to be considered as deflation or as something beyond deflation? There seems to be good ground for contending that such deflation is, at times, excessive, that prices are deflated far beyond what statisticians would call the normal prices preceding the inflation, and that, therefore, the deflation has done something more than squeeze out the preceding inflation. But conceding this, where does "normal" deflation end and excessive deflation begin? There appears to be no satisfactory way to distinguish normal from abnormal deflation, and it seems preferable to treat the process of deflation as synonymous with liquidation, and to maintain that it is all deflation regardless of degree or extent. Although deflation *as a process* may be considered the converse of inflation *as a process*, deflation cannot be an exact measure of the preceding inflation for various reasons: (1) the deflation may be far more extensive than the preceding inflation, if the normal price level preceding the inflation be used as a criterion; (2) losses resulting from inflation will have been incurred to some extent during the period of inflation; (3) the deflation may be arrested by some important event so that the preceding inflation may not be fully liquidated; and (4) in cases of extreme inflation by means of fiat money issues, as in Germany, most of the losses are incurred during the period of rising prices, and the deflation which follows is a mere perfunctory affair—in fact, it is not so much a matter of deflation as it is a matter of wiping the slate clean and starting anew—and in such

instances, the losses due to deflation are in no sense a measure of the preceding inflation.

The usefulness of our definition and analysis of inflation becomes more apparent when they are applied to the various means employed or proposed for "inflating" the currency.

(1) *The issue of fiat money* is a case of pumping unsecured paper money into circulation, and is an inflationary procedure of the purest form, since no additional reserves are set aside or additional goods created to liquidate it. Wherein lie the danger and future losses of such inflation? As we have already pointed out, they lie chiefly in the fact that prices rise in anticipation of inflation rather than as a result of increased purchasing power actually created by normal productive processes. After inflation reaches an advanced stage, production gives way to speculative buying and selling, characterized more by the gambling spirit and an effort to combat certain future losses than by the spirit of confidence which characterizes a normal period of rising prices. As inflation continues, the fear which it generates becomes more widespread, prices become more erratic in their behavior, productive activities stagnate, the nation is turned into a den of gamblers, the masses are steadily impoverished, and the groundwork is prepared for the inevitable collapse. Just when or how the collapse will come depends upon the manner in which the inflation takes place. If the fiat money is issued until the bitter end, as was the case in Germany, the losses will be absorbed gradually while prices are climbing to their dizzy heights. The eventual, final collapse is nothing more than the last agony of a process of the national government's looting and despoiling of the masses of people. If the inflation is stopped somewhat short of complete depreciation of the currency, there will be an aftermath of liquidation which, combined with the losses absorbed by the masses during rising prices, constitutes the total losses due to the issue of fiat money. Although certain classes of property holders may escape, and perhaps even profit from, the effects of rising prices generated by the issue of fiat money, practically every class finds itself caught when the ultimate collapse comes.

(2) *The issue of government bonds* may or may not be an inflationary procedure. If buyers of the bonds purchase them from savings, the government merely substitutes itself as the spending agent for the savers or the banks which may have been investing the savers' funds. The currency situation is, in general, undisturbed, and there is nothing about such a procedure that is inflationary. If, however, the purchasers use their bonds as collateral for loans, then another layer of purchasing power has been created on the basis of the bonds or the cash used to purchase them, without any additional reserve created or goods produced to offset and secure the newly-created purchasing power. The

savers are in the position of having spent their money and of still having it to spend a second time. For the moment, additional purchasing power is created out of paper bonds, and the procedure and effects are inflationary. How much actual inflation will result from such a procedure will depend upon the losses. If the loans were called immediately after they were made by the banks on the security of the bonds, the banks would probably obtain all the bonds in settlement, since the borrowers would not have had time to complete the transactions necessary to provide the required funds. The banks would lose nothing, assuming a steady bond market; but all the borrowers would lose their bonds. To the extent, therefore, that the future transactions of the borrowers do not produce the funds necessary to liquidate the loans, losses are incurred by the borrowers and others; and these losses, in general, constitute the measure of the preceding inflation.

When federal reserve or national banks purchase government bonds and use them as collateral for the issue of federal reserve bank notes or national bank notes, respectively, the procedure can be inflationary in the same manner, since the notes, in general, will enter circulation as the result of making loans and in lieu of deposit currency. An additional factor to be considered here, however, is that the possibilities of expanding the currency—both note and deposit—are much greater than if the expansion is based solely upon borrowing on the security of bonds. If, for example, the federal reserve banks purchase government bonds and use them as collateral for federal reserve bank notes, and then purchase additional securities in the open market with these notes, the tendency will be for deposits and cash in member banks to increase correspondingly. This new accretion of cash may be sent to the federal reserve banks for deposit where it will add to the reserves of member banks and enable them, as a system, to extend their loans by approximately ten times the amount of the added reserves. With such possibilities for increases in note and deposit currency, the possibilities of rising prices and losses likewise increase. This type of inflation is one of the most common and elusive; yet it is probably preferable to that resulting from the issue of fiat money since it is more susceptible of control, and, consequently far less dangerous. If the government should issue the $3 billion of additional United States notes provided for by the Thomas Amendment of May 12, 1933, these would go into member banks at once as cash deposits and would increase their reserves at the federal reserve banks correspondingly. On the basis of these increased reserves the member banks could add $30 billion to their loans and consequently to their deposits. But since such notes are also lawful money for reserves in the federal reserve banks, a secondary expansion of currency could take place. The $3 billion of United States notes would give the federal re-

serve banks a surplus reserve of $1.95 billion which would enable them to lend $5.57 billion to the member banks. This would serve as additional reserve for the member banks, and enable them to expand further their loans and deposits by $55.71 billion. In short, the total expansion of deposit currency possible on the basis of the issue of $3 billion by the government would be approximately $85.71 billion. If the various provisions of the Thomas Amendment should be employed, this country could see an expansion of its currency probably exceeding the wildest dreams of even Senator Thomas.

(3) *When the federal reserve banks, through open market operations, embark upon a policy of injecting more money and credit into circulation* through the purchase of government securities and bankers' acceptances, the procedure is usually called inflationary. When the reserve banks make their purchases they reduce their cash assets and convert them into bills and securities and increase the cash resources of the selling banks or acceptance dealers. In all probability the net result will be increased cash in the banks (let us assume they are members of the federal reserve system); the banks which are in debt to the reserve banks will pay off these debts, thus reducing the discounts and increasing the cash position of the reserve banks; and the remaining surplus cash in the member banks will be sent to the reserve banks to increase the former's reserves and the latter's deposits and cash. The final result may be increased reserves for the member banks and only slightly depleted reserves for the federal reserve banks. The possibilities of an addition to the currency in circulation depend upon the willingness of borrowers to borrow from their banks and upon the extent to which member banks employ the funds in repaying loans at the reserve banks.

Only when additional currency enters circulation does the question of inflation arise; and then the procedure is inflationary only when member banks make loans which are not adequately secured by reserves and collateral. The chief possibilities of inflation rest with the member banks in making loans; there is very little that the reserve banks can do to inflate the currency if they continue to function as they have normally functioned up to the time of the passage of the recent inflationary measures. There is no way in which the reserve banks can pump additional money into circulation and keep it there, as the government can inject fiat money into circulation, unless the public is disposed to spend and to borrow freely from the member banks. It is, of course, true that the reserve banks can engage in an inflationary process by making advances to the member banks on their promissory notes secured by government obligations, and the effects of these expansive influences are far-reaching; but the reserve banks must wait upon the member banks to make the expansive possibilities effective. When the public is in a

mood to spend and to expand, the member banks can expand, and such inflationary expansion can be aided and abetted by the reserve banks until the member banks exhaust their own reserves and then those of the reserve banks, at which point the reserve banks must call a halt which will precipitate a liquidation. Losses resulting from such an inflation fall largely upon the member banks and their borrowers rather than upon the reserve banks, because of the type and amount of security required from the member banks by the reserve banks. These losses measure roughly the inflation generated by the member and federal reserve banks, since it must be obvious that liquidation could not be forced or losses incurred if all debts were fully secured and could be paid.

(4) *The purchase of securities on the margin* is an inflationary procedure, since the seller of securities obtains his funds and the purchaser obtains purchasing power beyond his savings with which to purchase the securities. The purchaser must engage in other profitable transactions in order to obtain the necessary funds with which to pay off his loans; and to the extent that these loans are not paid off, or involve other liquidations to pay them, inflation has taken place. It must be clear that, if all securities were purchased out of savings, the problems of maintaining margins and of avoiding being squeezed out of the market could not arise; and enforced liquidations and consequent losses could not occur.

(5) *The purchase of goods on the installment plan* is quite similar to the purchase of securities on the margin and is inflationary in nature. The buyer does not purchase out of his savings, he is given a purchasing power in excess of his savings, and he must engage in other transactions in an effort to obtain the necessary funds with which to liquidate the obligations. The seller may or may not receive payment for the goods sold, but in either case there are possibilities of losses to the seller, buyer, finance companies, and banks; and these losses, which sometimes are very large and of far-reaching effect, are the measure of inflation which this variety of inflationary procedure produces.

(6) *The question of devaluating the monetary unit* has been widely, though incorrectly, considered as one of currency inflation. All readers will be acquainted with the Act of May 12, 1933, which authorizes the President to devaluate our standard dollar to an amount not exceeding 50 per cent of its present weight. Let us assume that the President cuts the dollar to one-half its present weight. What results may we expect? First of all, it should be recognized that no nation in modern times has ever devalued its standard monetary unit in order to force a rise in prices. Where devaluation has taken place, it has been after a period of inflation and in an effort to stabilize the currency at the value conceived to be the market value at the time of devaluation. For this reason,

the results which may be expected to flow from the proposed devaluation of our currency must remain, in some respects, conjectural.

Of a few consequences we may be certain. All holders of gold, which include the government, the reserve banks, gold miners, the exporters of gold, and the hoarders who still retain their gold, would have twice as many dollars. The gold reserves of the reserve banks would be doubled. The government could issue at least twice as many gold certificates as it has outstanding. The gold pars in foreign exchange would be doubled. All deposits in banks would remain for the present unchanged in the sense that they would call for the same number of dollars, but the dollars would be convertible into only half as much gold. Since 90 per cent of the exchanges of this country are normally effected by means of checks, it follows that 90 per cent of the currency would be unaffected at the outset. If the price level should rise, as the advocates of devaluation insist that it will, then these depositors, who hold this great proportion of the purchasing power, would find that their deposits buy less. The only way the holders of such deposits can profit by devaluation is to obtain in some way a sufficient amount of additional currency which will more than offset the losses in the purchasing power of the deposits previously held. Just how the procedure of devaluation will enable them to do this is not at all clear.

The reserve banks could issue more federal reserve notes and make more loans than is possible at present; but since the reserve banks at present have more reserves than they can employ, there would seem to be no good reason for an increase. The present reserves would support a price level far above that of 1926; and, therefore, additional reserves can meet no demands of the present. They can, however, be a source of genuine danger in the future, since such huge reserves would make possible a currency expansion exceeding anything this country has ever seen. With these doubled reserves in their possession, the reserve banks could purchase more securities and bills in the open market, and thereby increase the reserves of the member banks. Whether these excess reserves would be used by the member banks would depend upon the temper of the borrowing public. But should the public develop a fear psychology, as a result of seeing these transactions taking place, the stage would be set for a runaway price level which could continue until the reserve limits were reached, at which time, presumably, a price collapse would ensue. All other holders of gold, like the government, would have more dollars to spend; and, to the extent that this took place, the cash deposits and reserves of banks would be increased and, in turn, provide a basis for further expansion of loans and deposits if the public were disposed to borrow. Possibly the greatest addition to the currency would come from the government through the issue of gold certificates. If the

net addition to the currency, from this source, should amount to \$4 billion, and if this should flow into the banks as cash deposits, the banks could build up their loans and deposits to the additional amount of \$114 billion.

Importations would, presumably, come to a standstill because the costs in dollars would be doubled. This would be most unfortunate since this country is a creditor country and should have an excess of imports over exports. Exports would increase and continue on a large scale until the domestic price level rose to meet the foreign exchange rates, unless foreign tariffs are raised to counteract our increased exportations. There would be an inflow of gold, and bank reserves would be increased.

The question as to just what the psychological effect of such devaluation would be, and as to the extent to which we might expect the price level to rise, cannot be answered with any certainty. We can, as we have done, estimate in a general way how far the currency *could* expand, and we can see that this possibility is dangerous. Furthermore, it seems reasonable to suppose that the psychological reaction of the mass of people, particularly as reflected in the speculative markets, would make for higher prices, due to the fact that the public has been educated to expect such a rise. The same sort of reasoning would also lead one to expect that in time there would come a subsequent reaction, since the public must eventually exhaust its purchasing power, and also because the various other factors, such as increased bank reserves, which tend to support a rise in prices, would, in time, be depleted.

Devaluation of the standard monetary unit is not a case of currency inflation, although the effects flowing from such a procedure may have results quite similar to those generated by currency inflation. Devaluation is merely a case of adopting a new standard monetary unit. Inflation can take place on the basis of the unit already in existence. Devaluation of the proper sort—for example, to obtain stability in the price level—need not lead to inflation or deflation. We can have a fully-secured self-liquidating currency; and, as such, it escapes the classification of the various processes that are inflationary in nature. But devaluating the currency does create certain readjustments, if not maladjustments, in an economic system. New pars in foreign exchange appear. The status of international financial obligations is changed. Certain other shifts, as between various classes in society, are made. Currency inflation, on the other hand, does not create new exchange pars, although the commercial rates may fluctuate widely, and there are no *permanent* changes, *of necessity*, made in international financial obligations or in some of the shifts in the burdens and favors as between the various social classes.

The nearest equivalent to devaluation is found in the debasing of coin

by certain late medieval and early modern monarchs who used this means to enrich themselves at the expense of their subjects. For a long time it has been supposed that modern governments had advanced sufficiently in enlightenment so that we moderns need not experience the shame of seeing our government engage in a voluntary debasement of our coinage system. Some of the glamour which seems to surround the present agitation for currency devaluation might disappear if we called things by their correct names. Currency devaluation means currency debasement; and this means the expropriation of the great mass of people by the government. The losses would, in all probability, be suffered by the masses, as a result of currency devaluation and the probable rise in prices, even though all money and credit representing the new standard unit be fully secured and self-liquidating, and even though no inflation take place. In this respect devaluation differs markedly from inflation. If the devaluationist wishes to inflate the currency, he can do so on the basis of the present monetary unit. If he insists that he wants more currency without inflation, the answer is that he can get more money by devaluating the standard monetary unit; but that he will also escape inflation seems unlikely.

(7) *The attempt to "do something" for silver* as a means of increasing the amount of currency in circulation, either by reintroducing bimetallism, or by injecting more silver into circulation by other devices, is not a question of inflation but one of adopting another monetary standard or of diluting the present one.

It seems unquestionably true that many people at present have more or less reluctantly placed themselves among the ranks of the so-called inflationists for the simple reason that they have failed to distinguish inflation from various other devices for raising prices or manipulating the currency, some of which are not inflationary at all. Many also call themselves inflationists for the reason that they wish to see rising prices without realizing that there is a sounder road to business recovery and rising prices. To oppose inflation does not mark one as a bitter deflationist or as an opponent of rising prices. It appears that many "inflationists" have no appreciation whatever of the fact that the alternative to inflation need not be further deflation and disasters, as they assume, but a sound rise in the price level based upon a sound recovery in business. The virtue of a clear-cut definition and analysis of inflation is that one may consistently oppose inflation and at the same time support all programs which will lead to a sound recovery and rise in the price level until a state of economic equilibrium is reached. If our definition of inflation is accepted, one cannot support inflation, since by its very nature it carries within itself the seeds of disaster; and to recommend

inflation is tantamount to recommending disaster as a means of recovery. Another benefit that would be derived from the general acceptance of such a definition of inflation would be found in the clarification of present discussions regarding the multitude of currency programs before the country. Any critical reader of the monetary literature of today must realize that much of it is irrelevant and futile, for the simple reason that its chief characteristic is a profusion of vague terms and concepts used with great looseness, and frequently with little consistency or appreciation of the implications involved. The net result is that much of the current controversial literature on monetary questions has yielded very little of genuine value to those seeking responsible guidance.

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# THE NATURE OF ECONOMIC SCIENCE IN SOME RECENT DISCUSSION

**Professor Souter's essay on relativistic and biological economics is a panegyric in praise of Marshall, especially as against Professor Lionel Robbins' presumptuous efforts at improvement. It does not justify the author's pretentious claims, but does raise fundamental questions of theory and method. The postulates of utility-and-price mechanics are summarized and defended as sound and important within limits. Economic "dynamics" and other aspects of the "time" problem are considered; Souter's main theoretical contention, that "a shift in a curve for one period *is* an elasticity adjustment along a curve for another period" examined and found untenable. The distinction between economic and "exogenous" changes must be maintained, as well as a series of carefully drawn distinctions between short-run and long-run viewpoints. Relativity in economics should include mechanical relativity and the more important contrast between viewing phenomena from without and from within. Social subject-matter is known through communicative participation, not merely by external observation and inference as in the case of natural science. Price theory is one "approach" among many; is a partial view and rather preliminary, but a vital first step in the relevant discussion of social economic problems.**

Professor Souter's essay,[1] *Prolegomena to Relativity Economics*, may be regarded as an expansion of his article of last May,[2] replying to Professor Lionel Robbins.[3] In the book version, it becomes explicitly a defense of Marshall as a kind of hero-saint, with Robbins as the chief enemy, and Schumpeter in a subsidiary rôle of opposition. The book is not very pleasant to read, but if one can get behind the turgid, swash-buckling style and opinionated attitude,[4] it will be found to deal with fundamental issues. On these it is generally in the wrong in a technical sense; some of its errors are Marshallian and some would be repudiated by Marshall, but it would require the space of the volume itself to develop the distinction in detail. On the other hand, as against Robbins' limited, mechanical conception of economic science, Souter's "organic" position makes room for greater breadth and depth, but it is not in this preliminary volume worked out far enough to make clear its ultimate scope and implications.

The text consists of twelve sections, of which the first nine (91 pages) present the argument, the last three, filling nearly half the book, being a

[1] *Prolegomena to Relativity Economics: An Elementary Study in the Mechanics and Organics of an Expanding Economic Universe*, by Ralph William Souter, New York, Columbia University Press, 1933, pp. xvi, 171.

[2] "The Nature of Economic Science in Recent Discussion," *Quarterly Journal of Economics*, May, 1933.

[3] *The Nature and Significance of Economic Science*, by Lionel Robbins, London, Macmillan, 1932.

[4] Professor Souter's pages are sprinkled with epithets, in quotation marks or out: "incredible cocksureness," "complete innocence of any philosophical conception," "sublime imperviousness to the significance" (these all from six lines, p. 55 note); "words fail me to characterize" (p. 139 n.); "intellectual limitations of the amateur geometer," and "lacks the intellectual resources" (p. 143); *"pride goeth before destruction"* etc. (p. 143, n., his italics); "myopic resources of a neurotic logic," and "intellectual neurosis of Positivism" (p. 144, n.); etc., etc.

general discussion of methodology and elaboration of details. The author's twofold position is stated in Sections IV (continued in V) and VI (continued in the next three). It has to do, on the one hand, with the distinction between "static" and "dynamic" hypotheses or theories, and on the other with that between "mechanical" and "organic" analogies or patterns for economics. Both "dichotomies" are roundly characterized (p. 33) as "false." The author would have statics absorbed into dynamics and then both merged in an organic interpretation. In technical terms, the theme is the "relativity of the distinction between elasticity and shift" (*cf.* Secs. VII, IX, XI).

Now, in my opinion the distinctions which Professor Souter wants merged in a higher synthesis need rather to be made much *more* sharply than is generally done. He tends to argue throughout the book, both that a division between statics and dynamics is fallacious, and that Marshall himself makes the distinction adequately and correctly (*cf.*, specifically, adjacent pages, 30 and 31)! It is, however, the first of these views which the author seriously means—and both of them are wrong! In Marshall (*cf. Principles*, Bk. V, esp. Ch. V, and Bk. VI *passim*) there is an explicit refusal to distinguish systematically and correctly between growth of an industry at the expense of others and growth in the system as a whole—and the offense is aggravated (pp. 431-2 and 535-6) by holding that increased use of land always represents a transfer, while as regards capital and labor, increase typically reflects social growth. The space of this article must be largely devoted to an attempt at a clear statement of the issues, with reference at crucial points to Souter's apologetic; this means indicating briefly, *not* "the nature of economic science" in general, but that of "price-theory." This confusion is, in the reviewer's opinion, one of the main weaknesses in the classical tradition, and its continuators and critics as well, but it can only be avoided, not discussed, here.

Price-theory economics rests on the postulate that certain phenomena in modern social life are in some sense and some degree explained through human responses to price facts, and through motives or wants expressed in the response viewed as choices. Concretely, the situation conditioning choice is always one of price or motivation *difference*. In such a theoretical explanation, these differences are logically and methodologically like any difference in "potential" used to explain a natural process of the type of flow of water, heat, or electricity. The economic process as a whole is theoretically viewed as a "flow," partly of "material" through various "forms," partly of activity (in the very broad sense suggested by the term "services," of persons and things) not connected with a transformation of materials. In any case, the flow is explained as a

movement from lower to higher value, commonly expressed as price. Now in any such process, the flow necessarily "equilibrates" the potential difference which causes it and tends to come to a stop; and in fact everything that happens in organized economic life (in a price economy) tends to equilibrate or destroy some price-difference (and back of that one in motivation potential). Hence the concept of equilibrium. But underlying the economic process of production-exchange-consumption is the constant recurrence of "wants," analogically very much as the continued action of sun and air on water underlies, and maintains, the flow of rivers. Hence the economic process, like the rivers, shows no visible tendency to establish absolute equilibrium and to cease; and economic theory (embracing production) is not concerned with equilibrium in that sense. What is in question is an equilibrium of the *relative* flow of economic activity *through different channels,* somewhat as we work out examples in the distribution of flow through alternative channels in hydraulics and electricity.[5] Equilibrium means that the system is "stationary" as to changes or readjustments in flow, not that flow itself is absent.

One form or aspect of such an equilibrium is the notion of *maximum* (or its opposite, according to the form of statement—*cf.* the "least action" principle in physics). The "something" which must be thought of as maximized at economic equilibrium is *called* (rate of) want-satisfaction, or utility. This is the meaning of utility, its only defensible definition in price-theory economics. It is a quantifying concept—"that which" is compared quantitatively and of which "more" is chosen in preference to "less" by human beings, in so far as their behavior is "economic."[6] Souter "raves" at Robbins for insisting on "precision," but surely it is equally clear that the principles must be sharply de-

[5] The analogy must not be carried too far. The "law" connecting fall of potential, resistance, and flow, is not the same in economics as in electricity, for example; it runs in terms of decreasing increments instead of the inverse proportions of Ohm's law. Magnetism is closer to economics, since the "reluctance" increases (permeability decreases) as "flux" increases; this can be compared with "diminishing utility," but is still far from true parallelism with economic principles.

[6] It is important to keep in mind that in so far as price theory "explains" behavior, utility is what is actually maximized, to be distinguished from the notion of what people either (a) *try* to maximize, or (b) *ought* to maximize. It is the "force" determining choice, and may or may not be connected with wants. "Psychology" is hardly involved, or what and how much it has to do with the matter is a separate question, to be investigated on its merits; and most of Souter's discussion of utility (Sections VII and VIII) is beside the point. Price-theory is explanatory economics, and must not be confused with either a literally descriptive or a normative treatment. Both of these again fall into at least two important species. Descriptive economics may be behavioristic or humanistic, commodity statistics or historical and institutional. Norms may be either intellectual or critical, taking given wants of individuals as the only end, or recognizing that such wants are symbolic and social, moral and aesthetic, or religious. In fact, wants, so far from being *non disputandum,* are the chief things actually discussed and deliberated about. (*Cf.* p. 235 and entire latter part of paper.)

fined to the analyst and that no "precise" measurement of any of the magnitudes is possible or conceivable.

Another universal feature of any process exemplifying variable causes and effects is that equilibrium and the movement toward equilibrium are relative to "given conditions."[7] The conditions which must be assumed as unchanging or "given" in explaining a social system of economic relations are rather simply inferrable from the meaning in ordinary usage of the terms "economy" and "economize" and from everyday familiarity with buying and selling. Economy involves two general factors or elements; (a) technical knowledge and skill in using means, and (b) use of means for more important in preference to less important ends. By universal consent, economic theory abstracts from the technological element. It does this in the only possible way, by assuming technology as "given" (along with the ends and means). The economic problem which is left is that of *allocating* (*given*, limited) means or resources among different modes or channels of utilization. These different uses will almost necessarily be associated with concretely different techniques of manipulation, but these are taken for granted and only the allocative aspect of choice and behavior considered.

It is obvious, also, that comparison and allocation involve quantitative comparability in the final results of all uses of any "resource," that is, there is really only one end. More important, then, as regards an end, means simply larger, greater, in so far as the notion of economy applies. This general end of action is the want-satisfaction or utility already referred to, and the *maximum* total quantity (rate of realization) of the end is another way of saying (perfectly) economic behavior. It is all a system of relativity, but none of this seems to have been in the mind of our author in writing about "relativity economics."[8]

[7] Marshall constantly uses the phrase *ceteris paribus*, but not with reference to the conditioning circumstances of a system as a whole, but rather in order to hold all "other" features of the system itself constant so as to state a relation between some pair of chosen elements in it.

[8] Technology, or technique, must be understood to include the entire process of using resources to "satisfy wants," including the stages generally artificially and vaguely distinguished as "production" and "consumption"; if the latter term is used, it should refer only to the actual end-result, after all value creation or accumulation is complete. This end-result is something happening to or impinging upon a contracting member of economic society. It may be subjective or objective, internal or external, good or bad, satisfying or unsatisfying. Logically, we should like to distinguish between consumption for enjoyment and consumption for (a) maintenance or (b) increase of productive capacity; but the distinction can be carried out only as regards capacity embodied in external, saleable wealth, not as regards that embodied in the "person" of the individual.

The conception of technology and economics sketched here is in sharp and extensive contrast with that given by Robbins, with an approving reference to Hans Mayer (Robbins, *op. cit.*, 34-35). There the distinction is made to turn on the unity of end in a technical problem *versus* plurality of ends in an economic one. On the relations

The *data*, then, for an economic society in the theoretical sense, include individuals with their *wants*, *resources* of all kinds entering into the social exchange organization, and a system of *technology* (assumed to be used without exception at its best), and a "free market." The assumptions are, of course, highly abstract. This is a feature of all theory, and if it is not "precise" it is simply muddled. The only question is whether a significant element, or "moment," in individual behavior and social organization can be explained by motives and price responses, and whether the expositor of such an explanation should know what he is doing. Souter's first three sections, pretending to bring the assumptions nearer to reality, are essentially quibble. Until and unless the effects of errors and statistical and temporal variations are explicitly taken up and discussed, they *are* abstracted; they are not taken up, in general economic theory, including Souter's; again it is merely a question of being clear and candid as to what one is about. Such apologetics may, indeed, make theory more saleable to people who abhor careful analysis—which is all but one in a hundred thousand—but there are those who prefer getting it "right" to royalties or "recognition" obtained under false pretenses. As to practical use of the results, that depends of course on having the conditions under which the principles apply, and the *limits* of their application to reality, clear beyond misapprehension.

The terms "statics" and "dynamics" have only an analogical meaning for price theory, which deals with an equilibrium of flow, not a state of rest, and with a flow, not of physical material, or even of energy, but of "activity," defined and measured by economic comparison, *i.e.*, economic value. The second term, "dynamics," in particular, is for the most part badly misused in the literature. Though figurative, it is fairly definite and intelligible to call a statement of the economic conditions of maximum, or equilibrium, "statics." What should correspondingly be called "dynamics" is, or would be, the quantitative relations between force and change in the process of establishing equilibrium—*under given conditions*, "*of course*." Not much is generally said on this subject, for the good reason that not much is known about it, and perhaps for the better one that any literal measurement of forces and speed of change

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of ends and means to economic theory, Robbins is much less open to criticism than most writers who have discussed the subject. It is common to say that economics is concerned with means, not with ends. Some statements of Robbins lean in this unfortunate direction (pp. 23, 37) but elsewhere (p. 45) he is explicit that both means and ends are alike simply *data*. Finally, however, he does not make it clear that the third element in economic activity, namely technique, is in its concrete aspects in the same position. Economic theory is concerned only with the allocative aspect of economic behavior. Its entire argument comes under the single "economic principle" that a total result is maximized through allocating means among alternative channels of use (each subject to a law of diminishing effectiveness) in such a way that equal increments of means yield equal increments of end in all the modes of use.

on the pattern of a mechanical system is impossible if not conceptually unreal. I know of no serious attempt even to define the dimensions of the magnitudes that would be involved. This, I think, is unfortunate, since the terms inertia (in mechanics, mass) and friction (in mechanics, energy loss by radiation!) and various rates (velocity, acceleration, rate of flow, rate of change in flow, etc.) are bandied about continually, and should either be given some intelligible meaning or dropped. As used, they are vicious figures of speech, but economic phenomena do behave as if something like inertia and viscosity were present, giving rise to lags in adjustment and a tendency to oscillations of various sorts. One reason that so little of value has been done in this field is the misuse of the term "dynamics" to refer to an entirely different aspect of economic change, namely, changes in the given conditions of an economic system, instead of the process of establishing equilibrium under *given* conditions. In fact, there are *two* different sets of factors involved in these changes in the data, as will presently appear.

What we do have in economic literature, bearing on dynamics, correctly defined, is a mass of discussion on what is called the "time" problem, an inseparable blend of considerations having to do with establishment of equilibrium and (the two sets of) changes in conditions. Marshall's scheme of four cases no doubt forms the most generally recognized attempt to systematize the relations. It is wrong in a number of respects; but detailed criticism is not in order or possible here. We may barely list some of the most important steps in a correct analysis, with, again, occasional reference to Souter's argument. (He does not refer to the details of Marshall's treatment, but accepts it as final, except on one point, to be noted.) The principal sources of lag in the adjustment—reasons why time is required to establish equilibrium, and elements in the process—which call for treatment, seem to be the following:

(1) Individuals do not know their own "indifference surfaces"; and it takes time for them to learn what these are, including preferences among "productive" activities and between uses of productive capacity which do and those which do not become organized through the exchange process. This may be what Souter is driving at in Section VII, where he attempts to introduce a distinction between short- and long-period demand curves, parallel to that of Marshall on the supply side, as the one needed correction of Marshall ("the only valid criticism of Marshall . . . that he was not Marshallian enough"! p. 43). But I cannot understand how he means to define the curves, the variables and the given conditions; and his general conception of the curves in different periods is confused, as will be shown later.

(2) Many "lines of production" involve the storing up of so-called "consumption goods," and intermediate products; and variations in

such stocks (accurately, variations not anticipated and correctly planned for) must be ironed out before we can begin the discussion of the main problem of economic organization under given conditions—statics and dynamics—essentially the "allocation of resources." The basic principle of production equilibrium is that production and consumption are at the same rate.

(3) In the main adjustment, the organization of production, there are innumerable distinguishable elements affecting the transfer of resources from one channel of use to another; and these require time intervals scattered more or less at random from zero to infinity. It seems to me misleading and fallacious to draw any simple distinction such as a two-stage division between short- and long-period curves or equilibria (as Marshall does). What can be said is that the supply curve (or cost curve) is less inclined to the commodity axis as the time allowed for adjustment is longer, varying roughly from fixed (rate of) supply at one limit (an instant) to constant cost (in terms of sacrificed alternative products), or infinite elasticity of supply, at the other (infinite time).[9]

All the above considerations have to do with a "stationary society," *i.e.*, with economic life under given conditions as to (individual) wants, resources, and technology. This brings us to the supreme source of confusion in the treatment of the "time problem." One of the principal methods or processes actually involved in changing the allocation of resources is the replacement of specialized productive agencies by others of different form, when they pass out of use. This might be taken to include human beings, and, in discussing a society where labor meant slave labor, it should be (though human slaves never are "property" in the same sense as work animals). In a "free" society, every laborer is identical with his owner as a consumer, and must be assumed as "given" along with the latter. But there is no need for the departure from reality involved in excluding retraining of laborers and changes in

[9] In addition, the facts seem to warrant the statement that there is generally a mode in the distribution of the intervals required for various changes so that within a fairly limited period most industries would arrive at a state of rather gently increasing cost. (Assuming that their organization, size of plants and firms, etc., corresponds to "perfect competition," which it probably would do in the main if determined by conditions of maximum service efficiency.)

In this connection it needs emphasis that the transfer of investment depends chiefly on correct anticipation and planning. A large part of the total goes into ideas, good-will, etc., which never "wear out." But any investment made on the basis of correct foresight of the life of the item created will necessarily return to the investor during that life the original cost plus the market rate of return. Investments for a known limited life (such as a World's Fair) will presumably go largely into the two extremes as to form, either instruments which will just about outlast the period or instruments which will have a maximum of value for transfer to other uses at the end of it.

the *form* of non-human instruments, provided that the ***total quantity** of **productive capacity*** in the possession of each individual is kept unchanged.

This notion of a quantity of productive capacity, invariant through changes in form, cannot be defined quite unambiguously. Productive capacity is defined and measured by product, and there is no such thing as a purely objective value unit or index number. But the notion has meaning and is indispensable for analysis.[10] So much explanation has been necessary in order to state that the "stationary equilibrium" must be defined as a condition in which there is no longer an incentive to change the form of any productive instrument on replacement. This analysis is also useful as a transition to the treatment of "secular" changes in the "given conditions." For it introduces the idea of a quantity of "investment." Briefly, this means productive capacity produced at a cost, and cannot be further developed here. As already remarked, we have to consider two sets of progressive changes, one set being more or less explicable in terms of change in the total quantity of investment, while the other is not.

(4) Where an investment can be transferred from one use to another through change in form, it can be reduced or increased. In fact, we know nothing about normality in competitive economic life except under the condition that total productive capacity is rather rapidly increasing through more-or-less-rational new investment. The key-word here is "rational"; social growth through rational investment comes under the "economic principle" of choice between uses of resources and maximization of return. All activity productive of change in the data of a price economy, in so far as it is rational, can be analytically reduced to the simple form of sacrificing a current income at some rate, for some interval, and securing instead a uniform, perpetual income at some (much lower) rate for the future (or to the reverse process of disinvestment, passed over here). The choice between the two general uses of resources, current satisfaction and provision for increased future satisfaction, and the allocation of resources between the two, is of the same nature as allocative choice between any two "present" uses. In fact, a current increase in one's possession of the assurance of a future income *is* a current "utility." The rate of interest is a price ratio between current "con-

[10] Every objection which can be raised against it applies with even greater force to the indifference surface, which is also an intelligible concept, and something of the sort is indispensable if comparison and choice are to be used in the sense of cause and effect to explain behavior. The value unit is in fact practically definable within fairly narrow limits, as Professor Fisher in particular has emphasized. ("Indifference surface" seems preferable to "utility surface," since utilities are purely relative for each individual; there is no comparison of utilities between individuals, and of course, no "social utility.")

sumption" and provision for the future, which functions in the same way as the price ratio between any two forms of current want-satisfaction.[11] The fact of investment, providing for growth (the form of the net investment is "infinitely" various) superposes on the "dynamics" of movement toward equilibrium another level or stage of dynamics, moving the equilibrium position at the same time that conditions move toward it. But *this* type of dynamics can be relevantly treated, in part, under the forms of supply and demand curves, or functions expressing a relation between the price and quantity of something priced. The element of rational quantitative comparison and choice in saving and investment is undoubtedly smaller, relative to other considerations affecting action, than is true of the price motive in relation to the production and consumption of ordinary current products, but the general principle is the same.

(5) The final step is to note changes in economic data which are "historical" in a narrow, methodological sense, *i.e.*, subject only to "historical," sociological, or "institutional," and not to "economic" explanation. Every progressive change is of this sort in so far as it is not explicable in terms of rational investment; and rational investment plays a relatively small part in connection with most cumulative changes —not a very great part even in the routine creation of "capital goods." But it does play some part in most types of economic change, including changes in wants, creation of "good will" and even the rearing and training of laborers, as well as invention and discovery and the more usual forms of "accumulation of capital."

Such are the important factors or stages in the "time analysis," as I think they must be set up. Professor Souter's main thesis on the subject, the "relativity of the distinction between elasticity and shift" (pp. 40, 80, etc.), seems to be most clearly stated on page 145: "A 'shift' in a curve for one period *is* an 'elasticity adjustment' along a curve for another period" (*sic*).[12] This cannot be maintained, and his own de-

[11] This means that the value of income-yielding goods is determined by their cost of production in the usual sense. In theory, all wealth is income-bearing, the period of turnover being a technical detail. For special reasons, the "elasticity of supply" of capital goods is practically infinite (constant cost); and all this is a way of putting the fact that the natural rate of interest is determined by the "productivity of capital," irrespective of the psychology of saving. The sacrifice of "present wealth" (really a large income for a short period) for the sake of future perpetual income is much more accurately called "abstinence" than "waiting."

[12] It is entirely appropriate to observe that different aspects of economic change may counteract each other, and naturally will do so, in innumerable ways and degrees. Perhaps it is even conceivable that changes in wants and in conditions of production might leave all economic *relations* unchanged. Souter makes a great deal of this latter notion in several connections. Such growth without any relative change is difficult to imagine, and certainly infinitely improbable; moreover, the result would

mand analysis will illustrate the point. The difference between short- and long-period change lies in the "other things" which are assumed "equal" —"given conditions"—and the curves are analytically quite different. It is true that at several stages it is plausible to suggest a sort of "historical nexus" between different changes, for instance that a change in consumption in consequence of a price change *will* change the *relation* between consumption and price for the future. This *seems* to be Souter's meaning (*cf*. p. 136, n. 46, on "emergent" changes, 153, 158, etc., on exogenous change, and the assertion about the predictability of change, p. 35). But if the basis of prediction of the movement of a curve resulting from a change along the curve is itself a curve in any sense, it is certainly not a curve showing a relation between a quantity and a price. The analysis goes out of the price-theory field altogether, into that of "institutional" change through historical causality. Utility mechanics can tell us nothing as to whether people forced by the high price of bread to eat potatoes instead will learn to like them or find them increasingly distasteful; and if we do feel some assurance that an increased demand for a product is likely to cheapen production in the course of time, it is again not an inference from price-quantity functions. (In this case the historical change cannot move the curve upward since it will not cause technical retrogression, and any shift will be in the downward direction; the extent to which such a change is really the effect of the change in demand is never determinate, as the connection is not mechanical in form.) Furthermore, historical changes *cannot*, in general, be said to tend toward an equilibrium; they are perhaps more likely to be the opposite, *i.e.*, self-aggravating, or cumulatively self-generating, like a fire or a landslide—as technical progress seems clearly to be. A historical curve, with "time" as its independent variable, is hardly explanatory, rather merely empirical.

Souter's analysis shows a failure to understand Marshall's method of one relation at a time, or "*ceteris paribus*." A plane curve represents a partial derivative and will of course move "all over the place" as other interconnected variables change in the process of establishing equilibrium for the system. For some reason, Marshall did not want to talk about general equilibrium, which, however, is the only "normal" with general significance; and this fact determined the character of his entire treatment. The point regarding short- and long-period changes, in Marshall and in general, is that some sets of conditions forming the basis of functional relations or curves do remain *relatively* fixed so that changes follow the curve, approximately, within a certain interval. The

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be hard on the rent concept, which Souter as a loyal Marshallian is presumably obligated to defend.

long-period curves abstract from the short-period fluctuations just as completely as is true in the converse direction. What Souter says about "timeless" curves and the stupidity of those who draw them (p. 41, etc.) is unintelligible to me. A curve is "timeless" only in the sense that it pictures, as any curve must, the ultimate consequence of a change (under some given conditions) without saying anything about the time required for the effect to follow the cause, or the nature of the process involved. Perhaps the strongest argument against separate curves for the different intervals would be found on the supply side, in the fact that capital growth contributes so much to mobility; but this is not advanced by Souter or by Marshall, and in no wise removes the necessity for distinguishing analytically between differential growth and actual transfer, as long as the two are ever separate to a significant extent.

In conclusion—a few general observations which seem to be needed regarding the nature of *price-theory* economics. It seems to me reasonable, and as realistic as theoretical analysis can ever be, to start from the notion of "economy,"[13] which to the reasoning mind involves the notion or "ideal" of perfectly, completely, economical action. Since this ideal would be reached by a process extending over time, the problem takes the form of forces moving to an equilibrium. The notion yields a principle to which human beings *do* more or less approximate in behavior, and also more or less *strive* to approximate, and which, in addition, more or less *ought* to be approximated. Hence it is at the same time an explanatory principle, an intellectual norm, and an ideal. Yet these are different kinds of principles, and the economic principle can play any one of the three rôles only by virtue of fundamental limitations to which it is subject in the other two. It is hardly strange that in discussion involving it categories tend to become confused!

As regards relativity, I have already remarked that Souter seems oblivious to the relativity of economic magnitudes and changes in the natural sense of mechanical forces and movements. What he does mean by it is a question. In the later sections (particularly X) he lashes about wildly with long citations from Eddington and other cosmologists and philosophers currently popular among the intelligentsia, but the relation between what the passages quoted meant to the authors and what

[13] To my mind, the first great mystery in connection with the traditional British classical economic theory is the tendency to identify economy with economy of effort or sacrifice. *Why* is economy of effort more important than economy of anything else, or in any wise different? How, indeed, can effort or sacrifice be measured, apart from result, and what is the difference what circumstance limits the result? But Professor Souter apparently plumps for this feature of the classical tradition along with the rest. See pp. 53, 63, 70, 141, etc. *Cf.* also, F. W. Ogilvie, "Professor Marshall on Rent," *Economic Journal*, vol. 40 (1930), pp. 1-24.

they mean to Professor Souter or to economics is not clear to this reviewer. Relativity has one particular meaning which seems to me to constitute one of the serious omissions from economics and social theory generally, but I do not find it discussed in this book. The reference is to the difference between studying a subject-matter viewed from the outside and from the inside. I doubt whether "scientific" method will ever be very important to the ordinary man or the scientist as a means for understanding or controlling his own behavior. (I mean scientific method in the technical sense, including induction and deduction, and applied to the behavior itself; a similar statement should be made regarding the behavior of one's friends, and, with modifications, enemies also). Surely the study of social phenomena must be to a considerable extent identical with and dependent upon self-knowledge; and social control will be meaningless or monstrous if not associated with individual self-control, and unless the main ingredient is mutual understanding and regulation of action through *discussion*, which is a very different thing from observation and inference. It is to be noted, too, that social "science" itself is a social phenomenon of the most typical and important sort, communication aimed at agreement. And it seems doubtful whether the term "science" should be used without warning qualifications, to characterize discourse which must explain the discourse itself, and which is addressed to its own subject matter, and must change, and is primarily intended to change, that subject-matter.

The substitution of a biological analogy for, or its use in addition to, a mechanical one, opens the way to admit a somewhat larger scope of reality into economic theory, but it represents no great headway toward the intelligently relevant and inclusive discussion of the phenomena. The real difficulty is that our conception of theory itself has become mechanized, in biology as elsewhere; in so far as it has any "theory," it runs in terms of quantitative cause and effect, force and change. Adaptation is treated as a kind of movement toward equilibrium, though the conception is little more than figurative. If we accept the aphorism, "science is measurement," as a definition of science, which is its only intelligible meaning, then there is no such thing as "economic" science, or biological either; for certainly neither life itself nor adaptation, nor the "magnitudes" relevant to the concept of economy—namely, ends and means defined by ends—can be measured, in any defensible sense of the term. The entire utility analysis is a form, largely artificial and arbitrary, in so far as it is "precise," which is to be employed in connections where, and to the extent that, it has relevance. Its propositions are intrinsically unamenable to verification. The amount of relevance it has in different connections must finally be a matter of opinion—of, let us hope, or wish, *intelligent* judgment. There can be no mathematical

formula for maximum performance in connection with such values as victory or vengeance, beauty, morality, adventure, love, sport, conversation, family life, social success, or most of the things that people really care about. Economic life as a whole is significant chiefly as instrumental to such things, and the relation between economic efficiency and any or all of them is a problem in comparison with which the formulation of the purely abstract conditions of efficiency itself, in the limited field where efficiency has meaning at all—and that is all that any theoretical reasoning can do—is simple indeed. I feel that economics has always had the value relation essentially upside down, in advocating liberty as instrumental to maximum satisfaction. On this point, Souter rightly picks up Robbins in "the remarkable tautology" (p. 161, n. 79, quoting from Robbins, *op. cit.*, p. 127): " . . . given the desirability of individual liberty, absence of regimentation, power of continuous initiative, there is strong reason for supposing that conformity to the criteria of free economic equilibrium constitutes a fulfillment of these norms"![14]

The problem of method in the treatment of social phenomena pivots first on the nature of society. Natural science conceptions are relevant if the economist is adviser to a dictator who stands in the relation to society which is occupied by a human being in relation to a natural object; in that case the primary concern will be to *prevent* publication of the discussion to the society itself. In any moral conception of society, the central concept in its study must be relevance far more than truth. Truth, in the field of human data, is an enormously more limited and relative notion than even in any natural science, and the first and last question in the mind of the candid thinker must be one of the relation between proof and persuasion. Relevant discussion of social phenomena, within a moral society itself, must strive to minimize this scientific-instrumentalist attitude of investigation of techniques of manipulation of an external subject-matter, and also that of direct exercise of power through the discourse itself, and must aim at the mutual establishment of a consensus in the making of rules. The substance of society, in so far as it is free or moral, is the body of such rules made by human beings for their own association, with a view either to making their activity itself as interesting and satisfying as possible, or else to fulfilling what they conceive to be their "task" as human beings. Economic efficiency and economic liberty are beyond doubt vitally important in this connection; but their relations to the project and to each other are not of the sort pictured in a mathematical function to be maximized.

The "value" of economic goods and services is chiefly symbolic of so-

[14] For a brilliant exposition of Marshall's complete ambiguity on this deeper issue, see Talcott Parsons, "Wants and Activities in Marshall," *Quarterly Journal of Economics*, November, 1931, pp. 101-40.

cial relations, rather than causal, and instrumental rather than intrinsic. One cannot paint a picture without paint, and refreshments are nice at a party (and "decent" service at any meal!); but the human value of the result cannot be calculated from or quantitatively related to any data regarding the materials. On the other hand, poverty is a terrible thing; but attempts to define poverty in terms of quantities of goods and services yield most unsatisfactory results, even when carefully related to time, place and circumstances. My own feeling about price and utility mechanics tends to be one of impatience. What such inquiry has to say about real social problems is relatively little, though extremely vital. Also, it is rather preliminary. It should be, and could be, said without gross error in limited compass and the way cleared for discussion of larger issues. Failure to do this leads naturally to the tendency to repudiate it altogether.

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# THE RELATIONSHIP BETWEEN OUTPUT OF WORK AND ECONOMIC WELL-BEING

Some technocrats seem to believe that national wealth tends to be proportionate to national expenditure of energy, in particular, mechanical energy. A recent contributor to this journal expressed this belief. Being incompatible with fundamental tenets of price economics and at variance with observable reality, this belief calls for a critical appraisal. The relationship between energy expenditure and economic well-being is conditioned by the general nature of economic systems such as the use of capital equipment, the man-land ratio, dependence on outsiders, etc. Under market economy the relative scarcity of a product materially affects the economic well-being of its producer. Under certain circumstances a negative correlation between energy expenditure and well-being may be found to exist. Since the energy spent in the production of capital goods generally contributes to well-being only after a considerable time lag, correlation figures on a one-year basis may be meaningless. Creditor countries are apt to benefit from energy expenditures incurred by the debtors.

The March, 1933, number of this journal contained an article by Thomas T. Read, professor of mining, School of Mines, Columbia University, on "The World's Output of Work." In this article Professor Read furnishes estimates of expenditures of muscular and mechanical energy in thirty countries. These estimates, in part, are revisions of similar data prepared by Professor Read and published about six or seven years ago in *Mechanical Engineering*, the *Nation's Business*, and the *Atlantic Monthly*. Being expressed in horsepower hours per day, both in absolute totals and on a per capita basis for each nation, these calculations readily permit comparisons of energy expenditures of different countries.

Professor Read proceeds from these compilations to advance the thesis that a close correlation exists between the output of work and economic well-being. The final sentence of the introductory summary deserves to be quoted as the tersest expression of Professor Read's position: "A general relationship between work done per capita and economic well-being is observable; but a *precise* correlation is *not yet* possible."[1] This statement implies that eventually the precise correlation between output of work and economic well-being can be demonstrated. In the article, two reasons are cited to explain why this cannot yet be done—namely, the lack of complete and accurate data and the failure of economists to furnish a definition of wealth precise enough for use on the slide rule. This thesis being nothing less than a frontal attack on economic theory, the economist can hardly afford to ignore it.

The belief in a positive correlation between the amount of work done and the extent of economic well-being achieved thereby is very old. It stems from a primitive, unsophisticated concept of economic life, resting on the assumption that hard work is sure to be rewarded and that the

[1] Italics mine.

lazy cannot escape punishment. It is the ancient Law of Karma of the Buddhist applied to the realm of economic enterprise. The belief in this direct correlation between work and well-being may have its roots in the experiences of primitive man who supplied his wants by a direct application of his energy to nature. Regardless of the validity of such reasoning, it is certain that the simple philosophy of a direct appropriation economy can hardly be considered a broad enough base upon which to erect a theory of modern world economy.

The concept of economic wealth is generally limited to measurable quantities of economic goods and services and is inseparable from the idea of scarcity. Since the energy or work approach does not attach adequate importance to scarcity as a factor of value creation, the concept of economic wealth has little meaning for studies such as that made by Professor Read. If, on the other hand, the definition of wealth is broadened to include all "things" administering to well-being, obviously a close correlation between wealth and well-being is established; in fact, the two concepts are almost synonymous by definition. If this interpretation is followed, intangible values must be included, a fact which militates against slide-rule technique. In a study of almost unlimited geographical range which embraces countries of such diverse culture as the United States and China, Australia and Russia, a narrow definition of wealth in terms of price economics can hardly be applicable. The door must be opened wide to admit not only tangibles but intangibles as well. A starved, emaciated body may be regarded by the East Indian as essential to well-being. The mere fact that certain values cannot be weighed or measured does not in the least detract from their significance. In any worth-while comparative study of economic well-being these intangibles must necessarily be included, with the result that a mechanistic, quantitative study of the nature which Professor Read proposes is rather meaningless and futile.

We begin the critical analysis of the direct relationship between output of work and economic well-being by breaking it up into four constituent parts. The achievement of economic well-being through energy expenditure is generally conceived to be divided into two phases, production, or the creation of utilities, and consumption, or the application of utilities to the satisfaction of human wants. Production involves the expenditure of energy. Economic well-being presumably depends on the number of wants satisfied and the completeness of their satisfaction as well as on the wisdom of social objectives and the extent of their attainment. The correlation between output of work or energy expenditure and economic well-being, therefore, may be analyzed either from the side of energy expenditure or from the side of want satisfaction. In other words, variations of this correlation may result either from changes in

the manner and direction of energy expenditure or from changes in wants or want patterns and in social objectives. The correlation furthermore is affected by circumstances of time and place. The general assumption of an accurate correlation between output of work and economic well-being may be said to rest on the following four specific assumptions: (1) regardless of the diversity of civilizations, the want patterns and social objectives of different countries are identical or at least so similar that their satisfaction requires proportionate amounts of energy; (2) output of work everywhere and at all times produces equal amounts of economic well-being; (3) output of work everywhere and at all times leads to economic well-being after an equal, if any, time lag; (4) economic well-being is produced in the same country where the work is done.

If it is found that either the needs or wants of peoples vary with regard to the relative amount of energy required for their satisfaction, or that economic and/or social systems vary with regard to the effectiveness of work, or that variable intervals and gaps separate time and place of work done and of the economic well-being achieved thereby, Professor Read's thesis would appear untenable. The first step, therefore, in a critical appraisal of this thesis is an analysis of the validity of these four basic assumptions. They will be discussed in the order of their enumeration.

According to the criteria chosen, civilizations can be classified in many different ways.[2] For the purpose of this study the distinction between sedentary or pent-up, and mobile or expansive types of civilization, frequently stressed by Carver, may prove of special value. The vegetable civilizations of Monsoonia, comprising large parts of China and India, belong to the first category, while the machine civilization of the United States is the premier representative of the second group. As O. E. Baker has shown, Chinese peasants *must* crowd themselves in perhaps less than a third of the land which, appraised by western standards, would be considered arable. The most plausible explanation is that China at present lacks usable resource combinations on which a more mobile culture could be developed. Because of their almost exclusive dependence on animate, especially human, energy, the masses of Chinese peasantry are able to wring a livelihood only from extremely fertile land. At the same time the increased intensity of cultivation, resulting from crowding, tends to reduce the output per unit of energy expended by the Chinese farmer. The advantages of energy applied to fertile soil are absorbed by increasing population instead of elevating the Chinese level of well-

[2] For a fuller discussion of such a comparison see my book *World Resources and Industries: A Functional Appraisal of the Availability of Agricultural and Industrial Resources*, Harper, 1933, especially Chapters 6, 7, and 10.

being. On the other hand, however, Chinese peasants spare themselves the trouble of generating billions of horsepower hours of mechanical energy for the purpose of transporting large numbers of people and huge masses of goods over long distances. In short, by foregoing the benefits of mobility, they also save its cost.

While in China several hundred million people crowd on a few hundred million acres, no attempt being made to tie the inhabited areas into a single economic organism, in the United States little more than 125,000,000 people endeavor to operate a single economic system on an area of approximately two billion acres. It goes without saying that such a procedure requires vast expenditures of mechanical energy in the conquest of distance. Civilization, as Sumner points out, is a function of numbers in contact. This civilizing contact can be established either through physical crowding of people into limited areas or by means of an elaborate system of transportation and communication—railroads, airplanes, highways, automobiles, pipe lines, transmission lines, telephones, telegraphs, radios, etc. In other words, a vegetable civilization tries to exist on the least possible expenditure of mechanical energy, while a machine civilization, such as that of the United States, is utterly dependent on the lavish use of such energy. As Herbert Quick pointedly remarked, the United States is an experiment in transportation. He raised the question whether economic well-being can be permanently assured in a system whose enormous transportation overhead weighs heavily on every member of the economic community. If Professor Read were right in his assumption that every additional ton of coal burned under a locomotive boiler or every additional gallon of gasoline consumed by a motorist meant a proportionate enhancement of economic well-being, we should indeed be sorry that the Rocky Mountains are not twice as high and the distance from San Francisco to Salt Lake City is not twice as great. To view each and every part of a country's transportation and communication equipment as a net addition to its national wealth in the sense of well-being is equivalent to assuming that a giraffe is necessarily better off because it possesses a long neck. Without a long neck to balance its long legs the giraffe could probably not survive, but this long neck provides an excellent opportunity for the rending fangs and claws of the lion.

Before, therefore, comparative statistics of energy expenditure of selected countries may be expected to yield dependable clues as to their economic well-being, these countries must be divided into classes along the lines just discussed. Unless this is done, the appraisal of well-being in the crowded areas of intensive agriculture is warped by a double bias; inversely, such countries as the United States, whose population is backed

by many mechanical slaves and exploits an enormous domain, would receive a twofold premium.[3]

Moreover, the development of human wants can hardly be considered as unrelated to the supply of available resources. Human wants may be divided into two groups: basic creature wants which are common more or less throughout the world, and cultural wants which vary from place to place and from time to time. In countries in which sources of mechanical energy are scarce cultural wants develop along wholly different lines from those followed in countries blessed with abundant coal, petroleum, and other energy resources as well as with an all-important scientific spirit. As was pointed out before, the United States is necessarily dependent on mechanical transportation, but furthermore this basic requirement materially affects the process of want development. Mobility to the American has become more than a means to an end; it is about to emerge as an end in itself. As a nation we like to move about and to go fast, while inhabitants of other parts of the world are looking with amazement at our speed and travel mania. Frequently, no doubt, what to the uninitiated appears as a strange *wanderlust* is nothing else than necessary mobility. In countries possessing an abundance of human labor, highly skilled along artistic and similar lines, the national character tends to develop fuller appreciation of the services of such talented members and an entirely different relationship between economic welfare and mechanical energy expenditure results.

Finally, the law of diminishing utility tends to disturb the equilibrium between energy expenditure and the utilities created thereby on the one hand and the satisfaction of wants or the attainment of economic well-being on the other. Even if want patterns were identical, this law, well established in economic literature, would point to wide discrepancies between the availability of utilities and the resulting amount of economic well-being, unless indeed one were to make the fantastic assumption that all consumers possess equal utility scales or partake of each kind of utility in equal amounts.

We now turn to the second assumption, namely, that the same amount of work always produces the same amount of utilities and through them the same amount of economic well-being. It would be unfair to imply that Professor Read is insufficiently aware of the fundamental difference

[3] In order to forestall misunderstanding, it may be well to add a word of caution. The preceding analysis points to the conclusion that *for certain reasons* the high-power countries may be less fortunate than the power comparison would suggest. A final verdict on their economic status at this juncture of the argument would be decidedly premature. Later on, aspects of the problem will be developed which point in the opposite direction, making the high-power countries appear disproportionately fortunate. Final conclusions, if feasible at all, can only be drawn from a study of the net effect of all factors involved.

between mental and physical labor as a source of economic well-being. In previous writings, Professor Read has commented on the impossibility of measuring brawn and brain with the same yardstick. This writer also recognizes the fact that different nations use coal and petroleum in different ways and with consequent variations of effectiveness. One wonders, however, whether in maintaining his thesis of a necessary precise relationship between energy expended and economic well-being produced these differences have been kept sufficiently in mind. While Professor Read is entirely within his right when he declares that "the relative usefulness of different kinds of work takes us completely beyond the limits of this discussion," the exclusion of these factors from the analysis of the thesis is a logical impossibility. To take the comparability between brawn and brain first, it is self-evident that human energy cannot be adequately appraised in terms of physical or mechanical productivity. The greatest contribution which man can make to the productive process does not lie in the realm of physical labor but in the field of planning, organizing, directing, and aspiring. Although such work cannot be expressed in horsepower hours and therefore cannot be included in a table such as that prepared by Professor Read, its omission, nevertheless, is possibly the most serious defect of his tabulation as a basis of an appraisal of economic well-being found in different countries.

The calculation of energy produced with the aid of natural agents such as coal, petroleum, and falling water is very much more dependable but possibly not quite complete. In vegetable civilization such as that in the densely populated areas of Asia, solar energy is used directly in its current form rather than in its stored up forms of coal, petroleum, and natural gas, and fuller use is made of the living energies of plants and animals. While the human output of work which draws on these two forms of energy through food reflects to a large extent this peculiar manner of energy utilization, it does not do so adequately. Wood, a basic raw material of vegetable civilization simply grows and thus becomes available for use, perhaps with less expenditure of mechanical energy than steel, made from coal and other raw materials drawn from the sub-soil mineral deposits with the aid of elaborate tools and machines. Countries such as Sweden, Norway, and Finland, a large portion of whose territory is covered by forest, therefore are apt to make too poor a showing under the Read system of appraisal of energy expenditure.

Secondly, it seems possible that certain energies such as chemical energies of acids, chemical fertilizers, explosives, etc., have been omitted, which, though possibly small when considered separately, in the aggregate may prove of sufficient importance to affect materially the relative position of various countries as regards the output of work. Broadly speaking, Europe tends to make fuller use of such chemical energies than

the United States where the sources of mechanical energy happen to be unusually plentiful and cheap. Moreover, a French Peugeot automobile will run about 40 miles to the gallon of gasoline!

The difference is not merely one of degree of intelligence or of minor variations of technical efficiency between countries. It goes much deeper, involving the question of relative efficiency of different types of economic systems. If division of labor as a device to increase efficiency deserves the attention which economists have freely given it, then the same amount of energy spent, or work done, will produce widely varying results of economic well-being according to the extent to which functional, regional, and other specialization is developed. A simple coral reef type of economy in which economic cells are strung together without any attempt at functional correlation will show a much lower relationship of work to well-being than an economic system resembling a highly differentiated organism.

There is a close relationship between division of labor and the use of machinery and other capital equipment. It is widely held that the use of capital goods tends to raise the efficiency of labor which may mean the ratio of output of work to economic well-being. Countries differ widely in the extent of their capitalistic penetration. Some resist the introduction of machine methods altogether; others have barely made a beginning; still others are far advanced. According to the respective position which a country occupies with regard to this capitalistic penetration, the ratios between output of work and economic achievement obtained are bound to vary.

Economic systems, moreover, vary with respect to their dependence on or independence of the outside world. Some peoples still continue to live in more or less self-sufficient localized subsistence economy, while others are drawn in varying degrees into the stream of interregional and international exchange. In local subsistence economies a much closer relationship between output of work and economic well-being is apt to exist than in exchange economies. For in exchange economy the relative scarcity of that which is produced is often more important than the amount of energy required in production. In so far as economic well-being in an exchange economy is dependent on purchasing power, scarcity and small energy expenditures may yield more than heavy energy expenditures. Great fortunes have been made by people who discovered diamond fields, or struck an oil gusher, or invented a new process of wide applicability. The size of their fortunes can hardly be said to be related in any way to the amount of mechanical energy spent. A laborer will receive a high wage not so much because he gives more freely of his physical strength but because supply and demand relationships in the labor market happen to favor him. The farmer may receive a high price

for his wheat and hence enjoy economic well-being, not because he applied an extra dose of mechanical energy to his wheat field, but because a wheat shortage in the world market affords him a more favorable exchange ratio. This sort of reasoning applies to nations with equal force. Their position in world economy is affected by the "barter terms of trade"; these in turn depend largely on the relative scarcity of what they wish to buy and what they have to sell as well as on the relative intensity of the demand for these two sets of products.

Finally, in appraising the extent or intensity of economic well-being it makes a great deal of difference how widely the benefits of work done are distributed among the members of the social group. In other words, the per capita figures of work output from which Professor Read wishes to draw conclusions as to the per capita well-being in various countries, like all averages, may hide as much truth as they reveal. In a society whose masses are ruthlessly exploited by a tyrannical minority, the per capita labor might be high but a few might capture nearly all of the economic well-being.

As to the third assumption, the table of the world's output of work furnished by Professor Read gives "the latest figures available that were quantitatively the largest." (This means that in most cases the figures given pertain to the year 1929.) This procedure implies that energy spent in a given period of time is bound to yield its fruits of economic well-being during the same period of time. Such an assumption seems utterly unwarranted; for, does not capital equipment represent past energy expenditures, and is it not one of the greatest devices to render current energy expenditures more effective? In neo-capitalistic countries such as Australia and Canada whose inhabitants are still laboring to build their apparatus of capital equipment—railroads, machinery, factories, etc.—much energy might be spent without manifesting itself in current contributions to economic well-being. Present-day Russia strikingly illustrates such a state of affairs. In that country during recent years a much greater current economic well-being might easily have been achieved with a lesser aggregate of energy expenditure, if only a larger portion of it had been applied to the direct satisfaction of final consumer demands instead of to the erection of an elaborate edifice of producers' goods. On the other hand, it is possible that in 1950 because of the inordinate energy now being spent on the creation of producers' goods, each unit of energy spent will be more productive in terms of final consumers' satisfactions. Thus the ratio between energy expenditure and economic well-being would be as disproportionately favorable in 1950 as it was unfavorable in 1932. The capitalistic method of production is circuitous and hence based on demand anticipations and long-run planning. It expects a people to work hard in their youth—

figuratively speaking—so that they may have to work less hard in their old age. Distinctions such as that between pioneer and *rentier* nations and between debtor and creditor countries are, after all, relevant.

Nor must another angle of the time lag be ignored. A country in the interest of future generations may voluntarily slow up the exploitation of its wasting assets. Such a conservation policy generally involves a curtailment of current output of work and presumably an impairment of current economic well-being. Another country, choosing the opposite course, may revel in an orgy of current energy expenditure for the sake of current well-being, quite conceivably at the expense of future generations. Moreover, such policies of unbridled exploitation have a definite bearing on the current ratio of output of work to economic well-being.

Finally a spatial gap must be considered along with the time lag. Oftentimes the economic benefit from energy expenditure in one country accrues to another country. Thus the hydro-electric turbines of Norway may toil for absentee stockholders enjoying economic well-being in Paris, London, New York, etc. Similarly the energy spent in the Chilean copper and nitrate industries brings returns not only to Chileans but to outsiders as well. Frequently energy expenditure is greatest on the lower levels of production, that is to say, on those levels nearest to the soil or the mineral deposit, while the economic benefit is disproportionately greater on the higher levels of ownership and management.

Thus even a cursory analysis of the four basic assumptions reveals that none of them is adequately supported by fact. The invalidity of any one of them would suffice to throw serious doubt on Professor Read's theory; the invalidity of all of them clearly shows that his thesis is untenable.

This general theoretical analysis may now be supplemented by a few comments on the more practical and specific aspects of Professor Read's findings. We again turn to his statistical table showing output of work in thirty countries of the world. For our purpose it is unnecessary to discuss every one of these thirty countries; a few examples will suffice. The reader will recall that the United States headed the list of thirty countries with a daily per capita output of work of 13.38 horsepower hours, closely followed by Canada with 13.03, while India and China footed the list with 0.47 and 0.45 per capita horsepower hours, respectively. The United States, in other words, is credited with 29 times as much work per capita per day as China. Is it reasonable to assume for a single moment that economic well-being in the United States is 29 times as complete or intense as in China, or that any relationship even remotely approaching this figure can exist? Perhaps our periods of depression are the western counterparts of the famines, wars, and pestilence of the east. The truth of the matter is that, as Rühl has shown, the oriental

want pattern, the *Wirtschaftsgeist* of the Orient, is so different from that of the occident that purely quantitative and mechanistic comparisons are utterly futile. There are fabulously rich people in China as there are in the United States. To be sure, the forms of wealth differ. In both countries a fairly large portion of the population lives not far from the subsistence level, with this difference, however, that in our more complex economic and social system each member must possess a larger number of gadgets and know more "tricks" than his less sophisticated brother in the Orient has to bother with. It is probably true that even in "prosperous" times a fairly large percentage of the American people live in a way which, *mutatis mutandis*, is not radically different from that under which the overwhelming majority of Chinese people live. The emphasis must necessarily be placed on the *mutatis mutandis*. Economic well-being is necessarily a relative concept, and if that relativity is fully recognized the conclusion here reached can hardly be escaped.

To choose another comparison, we turn to Holland, one of the richest countries of Europe. Professor Read credits Holland with a daily per capita output of work amounting to 2.83 horsepower hours, or a little better than one-fifth of our own output of work. Anyone familiar with living conditions in the two countries would be loath to concede even the remotest possibility that our per capita well-being is five times as intense or complete as that of Holland. The fact is that Holland enjoys certain geographical advantages such as her position at the mouth of the Rhine, certain political advantages associated with Dutch neutrality, and economic and financial advantages derived from her economic control of rich colonies and the powerful position of her bankers in international affairs. For all these reasons Holland draws a great deal of wealth from other parts of the world through commercial and financial transactions wholly unrelated to mechanical energy produced in Holland.

Similarly, the figure for Switzerland which is almost exactly one-third of that for the United States must be viewed with extreme suspicion as a possible basis of relative economic well-being. Switzerland, in the first place, enjoys in its Alpine scenery and opportunities for winter sport natural advantages which come close to being monopolies. These natural advantages, being exploited with great skill, have become sources of considerable wealth. Their exploitation does not require a great deal of mechanical energy. In the second place, Swiss railroads earn large sums by hauling freight going from Germany or France to Italy and return. In that connection the possession of certain Alpine tunnels offers another great natural advantage. When the railroads were electrified the capacity of these "bottle necks" was greatly increased and the earnings of the railroads increased out of all proportion to increased energy expenditure. In the third place, with the exception of the time when

Napoleon raided the notoriously rich treasuries of Switzerland, perhaps with a view to financing his Egyptian campaign, that country has not been involved in war since the sixteenth century. For over 400 years Switzerland, enjoying the advantage of neutrality, has offered a refuge to those who have sought to escape economic persecution and who have desired a safe place in which to deposit their mobile wealth. As a result, Swiss banks for a long time past have played a part in international affairs and have contributed to the accumulation of wealth to an extent wholly unrelated to the energy expenditures called for by such transactions.

Holland and Switzerland are countries which, because of exceptional natural advantages or because of the peculiar character of their economic systems, are apt to enjoy economic well-being far in excess of the energy expenditure mechanistically appraised. On the other hand, there are other countries which have to turn out a disproportionately large amount of work in order to achieve even moderate economic well-being. Thus neo-capitalistic countries must spend much energy in the development of capital equipment. Sparsely populated industrial countries belong in about the same category. Western production methods call for a heavy expenditure of mechanical energy as well as for the presence of wide markets. The latter, especially if sparsely populated, can be exploited only by means of further heavy per capita energy expenditures. Finally, there are the sedentary agricultural societies, especially of Asia, which have ordered their lives and adapted their want patterns with a view to the virtual lack of inanimate energy.

Other types of social organization and economic system can be distinguished; but the classification here suggested may suffice to point the way for a more fruitful manner of utilizing the valuable statistical data brought to light by Professor Read than that of chasing the chimera of precise quantitative correlation between energy expenditure and economic well-being.

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# FORECASTS OF THE GENERAL PRICE LEVEL IN RETROSPECT, 1919-1931

This article presents a critical and analytical review of the theories underlying the forecasts of the general price level which were made between 1919 and 1931. The forecasts are discussed under types of prophecy: (a) the quantity of money as a determinant of future prices; (b) disequilibrium of production and consumption as forces underlying the trend of prices; (c) the influence of production and distribution of gold upon the future trend of the price level; (d) historical precedents as a price-trend barometer; (e) price behavior as an indicator of the future price trend.

Of the cases examined, which comprise the outstanding forecasts over the period from 1919-1931, a relatively large number of economists have come within a close range of predicting the declining trend of prices. It is noteworthy that the specialized attack upon the problem showed more accurate results than those forecasts which were based upon many variable forces of influence.

One special factor which failed to receive consideration in these forecasts is the influence of the rate of rapidity of change in industrial technique and organization upon supply and price. A theoretical and practical interpretation of this factor is offered.

Outstanding among economic problems which have been studied during the last fifteen years is the trend of the general price level. The termination of the Great War presaged important economic readjustments, many of which depended directly upon the future course of prices. Besides these impending readjustments, changes in the economic organization of society during the last generation made the study of this problem imperative.

(1) The continued integration of industry and greater complexity of urban social organization have increased the number of dependent workers whose livelihood is at stake with every major price decline. Besides this danger, large-scale enterprise has added to the risk of labor by threatening the security of savings. Savings from wages have found their way into channels of corporate enterprise. The fear of losing these savings, as well as fear of insecurity of work, has awakened an economic consciousness among the masses that has lent unusual force to the realization of instability in industry.

(2) International finance has enhanced the effects of price sensitiveness. In consequence of foreign investments, the arteries of the domestic money mechanism have become more closely allied with economic and political forces in other lands. The effect of any major dislocation overseas, unforeseen and obscured by previous favorable price situations, has eventually found its way to domestic shores—to the banker, to the investor, to the farmer, to the manufacturer. Throughout the world the new alignment of capital investment has propelled the operating facilities of commerce and industry; but, while so doing, it has not undertaken the responsibility to cope with the consequences of disturbing events which threaten economic stability at home.

(3) The expansion of social-economic functions by government has

called for a constantly increasing stream of funds to satisfy its needs. In securing this capital, the government has assumed barometric significance in financial markets. Here again, the penetrating effects upon economic stability of private enterprise has not left the people at large unscathed.

(4) Attempts at price stabilization by public authority have also contributed to increasing irregularities of general price tendencies. Some of these attempts were designed to make prices "safe" for the public-at-large, as in the case of mail, railroad, and public utility rates—practices, which in the light of experience can be considered successful, although not wholly undisputed. Again, other attempts have been designed to protect the producer from excessively low prices and from cut-throat price practices. Here belong the schemes of price fixing by gentlemen's agreement, by cartellized industries, by one-commodity monopolies, by coöperative organizations and by national governments.

(5) Failure on the part of political and industrial leadership to integrate the specialized divisions of economic functions into a social unity has increased risks, individually and socially. Institutional changes have failed to keep pace with economic changes.

The forecasts to be examined will be classified under types of prophecy. Briefly, these are:

(a) The quantity of money as a determinant of future prices.

(b) Disequilibrium of production and consumption as forces underlying the trend of prices.

(c) The influence of production and distribution of gold upon the future trend of the price level.

(d) Historical precedents as a price-trend barometer.

(e) Price behavior as an indicator of the future price trend.

With some modifications all of these studies might have been grouped under the factors represented in Irving Fisher's equation of exchange. These factors, however, treated at different hands and under different circumstances display different causal significance. They conform to propositions which are assumed to be of special weight in their influence upon future prices at the time of the investigation.

### *The Quantity of Money as a Determinant of Future Prices*

Professor Irving Fisher takes the credit for having ventured the first post-war attack upon the future trend of the general price level.[1] In summary, his conclusions that "we are on a permanently higher price level" were based upon the following grounds: a continued centralization of gold reserves; future gold accumulation by the United States; additional governmental borrowings for reconstruction and the availa-

[1] "Are Prices Coming Down?" *Review of Reviews*, vol. 59, June, 1919, pp. 595-598.

bility of war bonds for purposes of borrowing; and the extension of the habit of deposit banking to foreign countries.

Dr. Fisher, it seems, proceeded upon the hypothesis that the volume of circulating monetary instruments was the cause of the price level and that the volume of business transacted was merely incidental thereto and a passive element in the equation of exchange. Money, according to Dr. Fisher, has its origin in gold reserves. There was no obstacle in the way to a continuance of the high price level, or even a rising price level, as long as gold reserves accumulated more rapidly than the expansion of credit instruments and as long as the federal reserve banks saw fit to accommodate business enterprise with additional credit. The activating force of money which was derived from gold and the goodwill of the banking community determined, conditioned, and limited the price level.

As has already been indicated, Dr. Fisher failed to recognize that the volume of money, *i.e.*, credit instruments, is an adaptation to business needs and that trade connects directly with future prices, with the rapidity of commodity turn-over, and with the prospective margins of profit from trade in addition to its connection with bank reserves. Bank reserves are an effect rather than a cause of the volume of trade. Their lower limits restrict the volume of credit, which, at the utmost, is confined by the margin of the reserve ratio, of profits *versus* safety. Moreover, the consummation of trade contracts leads to the creation of credit and stimulates prices. These prices are both cause and effect. They are a result of the creation of debt; they are a cause in furnishing a basis for future trade transactions upon which credit instruments can be released and brought into circulation.

The confusion of one-sided distribution of gold with an actual addition to the gold supply contributed still further to Dr. Fisher's optimism regarding future strength of prices. The withdrawal of gold from circulation and its primary use for reserve purposes since the war, fashioned gold into an international medium to effect a settlement of balances between different currencies. To a certain extent the gold exchange standard prevailed already before the war, *i.e.*, by rule of thumb. It did not receive a real hearing, however, until the Genoa Conference in 1922, at which time plans were promoted to economize the use of gold by establishing gold centers and by extending to gold the function of international clearing. The principles of this theory are of classical origin. David Ricardo embodied them in *The Bullion Report.*[3]

In the annual report of the Federal Reserve Board for 1919, Gover-

[3] *The Paper Pound* of 1797-1821, a reprint of *The Bullion Report,* with an introduction by Edwin Cannan (London, 1919), Section II.

nor W. P. G. Harding stated in no uncertain terms that credit expansion must be checked and be regulated "with careful regard to the economic welfare of the country and the needs of its producing industries."[3] Gold holdings of the federal reserve banks remained nearly the same throughout 1919-1920, but the cash reserve ratio continued to decline until September, 1920. This decline of the reserve ratio was a matter of additional deposit and note liabilities which the federal reserve banks assumed in order to extend credit to member banks. It was a matter of controlling this credit expansion, rather than of protecting gold holdings, which prompted the federal reserve authorities to apply consistently advancing discount rates throughout 1920 and until April, 1921. Note contraction did not set in until early in 1921.[4] First and foremost, the central banking authorities aimed to regulate credit according to business needs and with a view toward economic developments; *i.e.*, they pursued a policy conducive to public welfare. In principle, the accumulation of vast stocks of gold and their propulsion toward renewed credit expansion were not considered in the interest of safe business conduct, nor in the interest of conservative banking, nor in the interest of public welfare.[5]

In the main, the price events of 1920-21 did not cause Dr. Fisher to change his viewpoint regarding the forces underlying the future trend of prices.[6] Nor did he give much attention to the warning sounded by Governor Harding. More or less, he ignored the conservative and the traditional policies of banking without which no system of modern economic organization can hope to function in the interest of public welfare. Besides this, however, he failed to observe the extraordinary conditions which prevailed regarding the self-controlling character of convertible bank note currency. The ready acceptance of credit instruments in international trade calls for an effective international function of the gold standard which at that time existed nowhere except in the United States. The federal reserve authorities were aware of the fact that convertibility of currency into gold presented no adequate protection against gold-credit inflation—hence, their policy of controlling credit expansion with a view of protecting business enterprise and public interest against the dangers of price inflation.[7]

Resembling the analysis of Dr. Fisher was the forecast of Dr. Royal

[3] P. 71.

[4] Harold L. Reed, *The Development of Federal Reserve Policy* (New York, 1922), pp. 320-322.

[5] See A. C. Miller, "Federal Reserve Policy," *American Economic Review*, vol. xi, 1921, pp. 190-195.

[6] "Will Prices Drop to Pre-War Levels?" *Review of Reviews*, vol. 64, July, 1921, pp. 68-70.

[7] A. C. Miller, *op. cit.*, pp. 200-201.

Meeker[8] who concluded that the pressure exerted by the volume of total indebtedness was the principal explanation for a continued high level, or possibly, higher level of prices.

The reasoning involved in this conclusion suggests misunderstanding of the principle of cause and effect in the relationship of debt, money, and prices. While there is some truth in the statement that money derives from debt, there is hardly a resemblance of truth in the further statement that present or future prices can be explained by the volume of debt or money derived from debt. Clearly, the reasoning should begin with prices, thence to debt and finally to money derived from debt. Real money derives from debt only within the limits of the quantity of available means of payment which are legally acceptable. It is not money that matters but *the kind of money* which derives from debt that raises an issue. At any one time, the existence of an excessive number of contractual credit claims against real money reduces to that extent the power of acquittance of real money, of incomes *earned*. Beyond the point of power of acquittance, real money fails to fulfill the function of a debt clearing-house. All debts which are created must, in the long run, fit with the ability of the debt clearing-house where the solvency of debt certificates is put to a test, either by setting off individual credits or by extending the facilities of the bank as an underwriter of credit. A state of insolvency exists when the total volume of debt which is being carried forward toward future liquidation exceeds the limits of present and future incomes. That is to say, that more dollars have been spent than are being earned currently and can be earned prospectively within sight of debt maturity. These earnings, again, depend upon the effectiveness of technique, the relative unit cost of output, with which production is carried on. Savings by way of continuously lower per unit cost may, in the long run, offset a similar increase in the rate of indebtedness. The constructive policy, however, in any case, is to provide an "unspent margin," savings, in order to protect a readily available stock of means of payment, *i.e.*, bank credit.[9] Inevitably, the exhaustion of the "unspent margin" means a curtailment of credit; probably, in fact, a contraction of credit with a resultant decline of commodity prices.

Again, the statement that indebtedness is a cause of high prices, is equivalent to saying that the demand for goods or services determines market prices. Dr. Meeker as well as Dr. Fisher failed to take account of the real basis, production, which provides the means of payment. Production implies output at a price with a view of such future price as will assure a profit. In order to obtain credit, the entrepreneur must

[8] "Improbability of Decrease in Prices and Cost of Living," *Monthly Labor Review*, vol. x, no. 2, February, 1920, pp. 95-97.

[9] *Cf.* R. G. Hawtrey, *The Gold Standard, Theory and Practice* (New York, 1931), pp. 11-12.

have the confidence of the banking community whose means of payment support production and market supply. In the long run, debt and money are equivalent terms only on condition that these debts fall within the range of present and future market price.

Early in 1923, this latter viewpoint was expressed by Dr. Benjamin M. Anderson, Jr., who stated that price recovery, productive expansion, and the abundance of bank credit injected grave risk into the future promotion of industrial activity in the event of a long-time decline of prices.[10] Widespread security issues by state and municipal governments and a granting of liberal industrial loans at home and to foreign countries was breeding a prosperity which was founded on a confusion of bank credit and liquid funds with real capital. In failing to recognize credit lines and security issues as additional liabilities to be paid out of future earnings, partially through taxes, business and government assumed new obligations at high prices.

### *Disequilibrium of Production and Consumption as Forces Underlying the Trend of Prices*

In a paper entitled "Prices and Reconstruction,"[11] Dr. Wesley C. Mitchell laid down the character of his problem in the following words: "We know fairly well what factors affect the movements of the price level, and the direction in which each factor works. Concerning the relative importance of these factors our knowledge is less secure. . . . What of the near future?"

Dr. Mitchell's attack upon the problem was centered in a distinction between "business prosperity" and "industrial prosperity." By 1920, the accumulated maladjustment of economic forces under the stress of war had been unable to effect an equilibrium of the future relations of production and consumption. Employment in factories and indexes of physical volume of production showed a distinct decline below 1918. The statistical position of the general price level, of building permits, and of "outside" bank clearings lacked strength. Exports were running afoul of depreciating currencies abroad, threatening an undermining of American credits to foreign buyers.

Technically, the causal sequence of events which operate within the equation of exchange had reached the turning point. The activating forces of $P$ and $T$ were about to be displaced by the limiting factor of $M$. The expansion of credit had been carried to the lowest limit of bank reserves. Control over the business community by banking interests seemed imminent.

[10] "Underlying Factors in the Business Situation," *Chase Economic Bulletin*, vol. iii, no. 1, March, 1923, pp. 8, 11-14, 17-25, 32.

[11] *American Economic Review (Supplement)*, vol. 10, 1920, pp. 129-155.

At this point, of what is cause and what is effect, well known differences in the analytical study of prices are at issue. Writing in 1924,[12] Dr. Benjamin M. Anderson, Jr., challenged the contentions of the "quantity theory school" whose price forecasts, he said, had been much discredited upon the experience since the World War. The primary factor which exposed renewed industrial productivity to the hazards of an uncertain price level was the disequilibrium of prices among the various industries—food, raw materials, and manufactures. According to Dr. Anderson, the counteracting competitive forces had not yet recovered sufficient strength to effect a balancing of production. The element of time was against it, and European manufacturing activities had not yet revived to an extent to make their influence upon commodity prices especially felt. Unlike the suppositions of quantity theorists, Dr. Anderson believed that the price problem involved relationships of individual prices to each other, not only within any one country but throughout the world.

Again, in 1929, Dr. Anderson reëmphasized his opposition to the views held by quantity theorists that the horizontal trend of commodity prices was the result of mechanical equilibrium.[13] Instead, he held that causal factors lay imbedded in specific conditions which surrounded the expansion of bank credit during the period from 1921-1928. First, an export surplus had been maintained, financed by foreign security issues in favor of debtors whose interest on past borrowings was due and whose appetite for more goods remained undiminished. Again, long-time construction projects at home and widespread underwriting of deferred payment purchases had taken place. Finally, large-scale spending by consumers out of accumulated profits, realized and unrealized, in speculative markets, had braced the commodity price level along a horizontal course. "For myself," said Dr. Anderson, "I should prefer a lower and a more dependable price level, maintained by the expenditure of normal income. I should prefer to have an export trade soundly based on the balancing of goods and services against goods and services. I should prefer to have a building trade financed primarily out of investors' savings."

Perhaps neither the "monetary school" nor the "quantity theory school" can pursue single-handed a line of clear-cut reasoning regarding cause and effect of prices and price tendencies. The truth probably lies somewhere between these two analyses of price movements. It will depend upon varying economic, social, political, and other conditions surrounding the individual problem as to how far each theory can be used as an

[12] "Cheap Money, Gold and the Federal Reserve Bank Policy," *Chase Econ. Bull.*, vol. iv, no. 3, August, 1924, pp. 11-13.

[13] "Commodity Price Stabilization a False Goal of Central Bank Policy," *ibid.*, vol. ix, no. 3, May, 1929, pp. 9-13, 17-20.

approach and tool for analysis. Probably in most instances a combination of the two theories is not only necessary in order to observe all economic phenomena concerned, but also indispensable in order to weigh and appraise their function, of cause and effect, of action and reaction, which takes place in the orbit of price relationships.

Maladjustment of purchasing power among farm and urban enterprise formed the basis of Dr. David Friday's forecast of a long-time decline of prices.[14] Various analyses of different interrelationships of these industries were employed to substantiate this forecast. He presented evidence that whenever price disequilibrium develops between primary and manufactured goods, no matter whatever the cause, in the long run the tendency will be for the industrial structure to adapt itself to the price level of primary products. Among these analyses are: (1) the technical supply-price relationship of production in agriculture and manufactures; (2) the ratio of total value of farm products and total value added to raw materials by manufactures; (3) industrial reconstruction.

Lacking flexibility in adjusting production to changing prices, facing export outlets clogged by an insufficiency of foreign exchange credits, by depreciating currencies and disrupted manufactures abroad and protective tariffs at home, agriculture found its way toward a recovery of purchasing power definitely blocked. In addition to these obstacles heavy mortgage obligations had to be carried along.

The sustained urban recovery after 1922 failed to improve farm prices. At this point, Dr. Friday's contention that urban industrial activity could not get under way without the support from a prosperous agriculture, failed of realization. Historically, Walter Bagehot observed in *Lombard Street*, that "when the stimulus of cheap corn is added to that of cheap money, the full conditions of a great and diffused rise of prices are satisfied."[15] Investigation of this relationship over the period from 1890 to 1929 found Bagehot's observation to be substantially correct.[16]

The expansion of credit by central banks in support of industrial activity prevented a ready adjustment approaching the pre-war equilibrium between prices of agriculture and manufactured commodities.

The analysis of Professor E. R. A. Seligman exemplifies the influence of productive and non-productive expenditures of government upon social utility.[17] By 1924 tendencies toward an equilibrium of the ratio of

[14] "The Future of Prices," *New Republic*, vol. 31, 1922, pp. 10-12.

[15] (New York, 1895), pp. 147-148.

[16] "The Relationship of Business Activity to Agriculture," *Journal of Political Economy*, vol. 38, no. 4, August, 1930.

[17] *Proceedings*, Academy of Political Science, "Taxation and Prices," *The Future of Prices at Home and Abroad*, vol. xi, November, 1924, pp. 247-257.

spendings to earnings indicated future declining prices. The accumulation of savings since 1921 made it possible to retire part of the indebtedness incurred during the war and to apply the margin of difference to further production and real income.

The principles upon which Professor Seligman proceeded to explain the trend of prices had as yet remained untouched by the undercurrents of "new era" expansionist policies. Fundamentally, his theory passes unchallenged by practical reality.

### *The Influence of Production and Distribution of Gold upon the Future Trend of the Price Level*

Dr. Wesley C. Mitchell's discussion of the long-time trend of prices dealt in particular with the effects of European resumption and the aspect of international competition for gold.[18] He, more or less, sensed the future hankering spirit of discord prevailing in international economic and political affairs and the false hopes pinned to the gold exchange standard. Dr. Mitchell called for caution in relying too confidently on the opinion shared by the banking world and various economists that a supplementing of gold reserves from circulation would support a greater credit structure, and hence, a higher general price level than that of 1913-1914. The world distribution of gold, such as existed in 1920, had been due to the war and was likely to be influenced by future political causes rather than by economic coöperation. Dr. Mitchell's theory inferred that a smooth operation of an international gold standard demanded public confidence first and foremost; that a high degree of coöperation among central banks of the various foreign countries was necessary in order that bank reserves in form of foreign assets be honored; and that international trade be geared in such a way as to permit the free flow of gold, of goods, and of services. Every one of these factors was an essential preliminary to the smooth operation of the gold exchange standard and to the hopes of commodity prices maintaining a level considerably above the immediate pre-war level.

That the diminishing output of gold tends to influence the trend of the general price level more than any other factor, was stated by Professor Allyn A. Young in 1922.[19] As a modifying factor, in exerting a downward pull on the price level, he allowed for increased economy in the use of gold: " . . . even with a declining rate of increase of physical production, something like equilibrium between the output of goods and the output of gold will ultimately be reached only at a distinctly lower price level than is in immediate prospect."

[18] *Op. cit.*, pp. 153-155.

[19] "The Trend of Prices," *American Economic Review, Proceedings,* vol. xiii, no. 1, March, 1923, pp. 5-14.

In January, 1929,[20] Professor Young offered further qualifications in support of his forecast of a probable downward trend of prices. The failure to understand the relation between the rate of increase of total volume of currency and credit and the rate of increase of annual production of wealth has been of two kinds and both have aggravated the economic problem, said Professor Young. First, monetary theorists, for purposes of investigating and arriving at stability of the value of money, have compared the total supply of purchasing power with the aggregate volume of exchanges for which money is used. In so doing, they confused the real meaning and effects of changes of the "velocity of circulation." Second, the difficulty lay in the failure to recognize the factor of elasticity which prevailed in the relation between annual production of wealth and availability of purchasing power.

Gold and banking policies were the second factor that has an immediate bearing upon the limits of elasticity of available purchasing power. The quantity of gold held by central banks and governments in 1929 was about twice the amount held in 1913. This supply plus banking economy in the use of gold, "are quite as adequate in relation to the present general levels of prices and production as the gold reserves of 1913 were in relation to the levels which prevailed in that year." The danger regarding the trend of prices, in relation to the rate of wealth production, lay with the future rate of output rather than the present supply of gold. The responsibility of meeting the emergency was put, in final analysis, upon the central banks which were to pursue a rational policy in the use of gold in adjusting the available purchasing power to the growth of production of wealth.

Professor Young named gold and gold nationalism as the third factor which exerts a downward pull upon the general price level. Instead of recognizing international trade in terms of exchange value relationships to be settled in commodities, nations were pursuing a one-sided policy of demanding settlement in terms of gold. "A gradual downward trend of prices is probable, not because the supply of gold is or will soon become inadequate, but merely because the central banks of different countries will probably try to maintain their separate hoards of gold."

In various quarters it has more or less been accepted that competitive bidding for gold in international markets contributed to a major extent to the decline of prices the world over. Drs. G. F. Warren and F. A. Pearson reasserted their position repeatedly on this point.[21] So did Dr. Lionel D. Edie, who maintained that the problem called for two lines of

[20] "Downward Price Trend Probable, Due to Hoarding of Gold by Central Banks," *Annalist*, vol. 33, no. 835, pp. 96-97.

[21] *The Agricultural Situation* (New York, 1924), pp. 258-261; see also *Farm Economics*, Cornell University, nos. 45 (1927), 50 (1928).

analysis: one dealing with the rate of production of new gold; the other dealing with economies in the use of gold. The gold exchange standard had not reduced the yearly additional requirements of gold at which a long-time decline of prices could be warded off.[22]

Dr. E. M. Patterson questioned whether the historical tendency of correlation between the main trends of the general price level and gold production would show a similar relationship in the distant future. Gold concentration practised by banking institutions during the war, chiefly those of England and the United States, had strengthened bank reserves and thereby permitted a relatively more liberal policy of credit expansion. In view of this policy and failing to increase production greatly, "we may expect a price level higher than that before the war although not so high as at present."[23]

### *Historical Precedents as a Price Trend Barometer*

Different degrees of emphasis were placed upon the use of historical data for purposes of arriving at the future trend of the general price level. The forecast of Professor Irving Fisher, that prices had reached a permanently higher level, was in part supported by historical precedent, with the modification that the gold basis of the inverted pyramid of our monetary system had outgrown the super-structure of credit instruments.[24] Dr. Wesley C. Mitchell gives historical tendencies of the postwar price movements of the nineteenth century but passing attention.[25] And so does Allyn A. Young, who held that during each period a different set of factors of production yield a group of different interrelated complexes. In the nineteenth century resources were operated under the influence of increasing returns. Today the question of the rate of diminish-

[22] "Post-War Fluctuations in Wholesale Commodity Prices," *American Economic Review, Supplement,* vol. 18, 1928, pp. 46-66; see also, "An International Viewpoint on Commodity Prices—Long Decline in Prospect," *Annalist,* vol. 32, no. 826, November 16, 1928.

The above point of view has, of course, not passed unchallenged. T. E. Gregory maintains that there was no gold shortage in 1929; that, in fact, the maldistribution of gold was an effect rather than a cause of prevailing uncertainties in international economic relationships; and, moreover, that the coöperative spirit of central banks ran counter to political influences and trade obstructions. See *The Gold Standard and its Future* (New York, 1932), chap. 1.

J. Laurence Laughlin attacks the gold argument upon theoretical grounds. He contends that prices are primarily a result of the reciprocity of demand for goods. Changes in the value of gold, he says, come about slowly and, besides this, it is not even clearly established that credit to do "money work" is directly influenced by the supply of gold. See *Money, Credit and Prices* (Chicago, 1931), vol. i, pp. 445, 490, 493; vol. ii, pp. 694, 702.

[23] "Prospective Changes in the Price Level," *Annals,* American Academy of Political and Social Science, vol. lxxxix, May, 1920, pp. 8-12.

[24] *Op. cit.,* vol. 59.

[25] *Op. cit.,* p. 129.

ing returns of precisely these resources is assuming an ever increasing practical significance.[26]

Drs. G. F. Warren and F. A. Pearson placed historical precedent next to the influence of gold output as the major indicator of the future trend of prices. During the War of 1812, the Civil War, and the World War, prices in general had advanced with increasing circulating media and had collapsed upon subsequent contraction of credit.[27] "In each case there has been a close relationship between money and prices."[28]

### *Price Behavior as an Indicator of the Future Price Trend*

The outstanding characteristic of the diagnosis of the price situation undertaken by Dr. Frederick C. Mills[29] in 1927 is the emphasis given statistical methods and measurements in order to build up evidence for a "new era" theory. Lacking a definite theoretical approach to his problem, Dr. Mills took hold of his thesis by investigating the historical tendencies of internal disturbances in price relations, price variability, and price trends. In so doing, he was, at the outset, more or less handicapped by being compelled to confine his analysis to precepts, which, by the time that he reached his conclusions, set up limitations beyond which penetration into fundamental relationships of economic phenomena became impossible.

Dr. Mills's problem had for its basis a study of price behavior from which he aimed to derive certain future tendencies of price behavior. Beyond this aim, Dr. Mills attempted to trace the effects of changing statistical price relationships upon economic organization and business practices. These conclusions that were drawn from apparent principles of price behavior extending over a period of about forty years should be re-submitted to theoretical analysis.

One may reasonably assume that price relationships which extend over long periods of time and which show definite evidence of type in relationship, *i.e.*, definite characteristics in relative variability, trend, and general behavior, provide certain principles which, all else remaining equal, can be applied to future behavior of prices. The problem, however, which Dr. Mills set out to solve, differed considerably from the even tenor of price relationships such as may be assumed and answered theoretically. Pre-war and post-war price relationships showed two dis-

[26] *Op. cit., American Economic Review, Proceedings*, p. 6.

[27] *Op. cit.*

[28] G. F. Warren, "Prices of Farm Products in the United States," United States Department of Agriculture Bulletin 999, p. 25, August, 1921; see also "Prices of Farm Products in New York," Cornell University Experiment Station Bulletin 416, p. 37, January, 1923.

[29] "Post-War Prices and Pre-War Trends," *Proceedings*, American Statistical Association, vol. xxxiii, new ser., no. 161 A, March, 1928 (Supplement), pp. 45-67.

tinct types of variability and trend. The post-war price relationship of various commodity groups were still much disturbed by world-wide economic and political dislocations and had, in fact, not been able to get back into the old track by 1927. Meanwhile the general price index had maintained a relatively uniform trend as compared with a rising trend during the pre-war period. Again, the tendency toward the stability of individual commodity prices prevailing before 1914 reappeared in 1922. Further diminishing price variability and further declines in the average degree of dispersion of wholesale prices were expected if "one may assume that during the years immediately in front of us there will prevail a stable price level or, at least, one not marked by violent changes."[30]

The "new era" theory by Dr. Mills was based upon shifts of fundamental economic relationships which were represented by differences in the price trend of individual commodity groups. For the post-war period these trends of commodity groups showed distinctly different rates of change; hence, according to Dr. Mills, the shifts in fundamental economic conditions differed much from those of the pre-war period.

Dr. Mills attempted to reason from effects to causes. At least, he assumed that "long-time" tendencies of price behavior indicated a change in the fundamentals of the economic structure, and that this change indicated a "new era."

Is it not possible, however, that under the influences of monetary fallacies and financial stupidities, price disturbances may set in which are not fundamentally or permanently related to the structure of economic organization?

How much real evidence there was to cause the author to arrive at the "new era" concept may well be questioned. Post-war trends of all kinds as compared with pre-war trends lacked the test of time which is associated with this type of statistical measurement. Different price trends when measured over relatively short periods, especially such years as the decade of 1920-1930, do not necessarily indicate changes in fundamentals of economic institutions, organizations, and technique. The causes which influence economic processes and relationships over long periods of time had had no opportunity to work out their full effects. Nor is it to be expected that "organized intelligence" can develop in an individualistic society within a span of ten years or less to the extent of determining the trend of the price level. Moreover, omitting the influence of gold, the trend of the general price level is the result rather than the cause of the action and reaction of individual commodity prices. The observation of Dr. Mills, that the degree of individual price variability and price dispersion during the post-war period tended to decline,

[30] *Ibid.*, p. 62.

merely indicates that the general price trend had attained "approximate stability." The "approximate stability" of the future general price level derives, in final analysis, from the relative stability of its component parts.

### *Summary and Conclusions*

In this paper an attempt has been made to restate in essentials and to examine critically the outstanding forecasts of the general price level of the post-World War period. On the basis of the findings one must assume that a constructive attack upon the problem calls for an investigation of the relationship of factors which underlie the equation of exchange. Included among these factors are gold production, bank credit, the rate of savings and spendings, the rate of technical change in production, the methods of business, the financial structure of society, the state of domestic and foreign trade, and the influences which emanate from the character of economic, social and political institutions.

Several of the forecasts examined brought within the scope of the problem many of these forces of influence. Commonly, a weighing of these factors in their respective influence upon the price trend presented a particular problem. This is especially true regarding the method of analysis which in most instances did not combine a well rounded balance of historical precedents, of statistical technique, and of economic theory. It is noteworthy that the specialized point of attack upon the problem combined these working tools with greater success. This latter point of attack usually involves a study of the relationship of not more than two pairs of factors. While their function is limited in scope and restricted to relatively narrow areas of economic phenomena, nevertheless, the results attain greater accuracy. Of course, the simplification of the problem in itself represents dangers. The chances of leaving certain theoretical influences of other factors unobserved are enlarged and the probable error from over and under emphasis of cause and effect is enhanced.

In the opinion of this writer there is but one special factor which failed to receive proper consideration in its influence upon the future trend of prices: the *rate* of technical change in production.

The theoretical framework, of which there are traces in the preceding studies of Drs. Mitchell, Young, and Anderson, but which has otherwise remained obscure, fundamentally treats *the influence of the rate of rapidity of change in industrial technique and organization upon supply and price.* The issue, in this case, has but little relation to the general theory of over-production; rather, it treats of the effects of these rates of change upon supply and concurrent over-capitalization involved.

Theoretically and without *a priori* evidence it must be assumed that the time elements which underlie the equation of exchange differ in their influence upon demand and supply schedules. Changes in demand and

supply schedules respectively indicate two different influences which, for purposes of conjunctural analysis and price trend, are to be noted. The long-period effects which operate on each schedule are represented by complete shifts of schedule and signify a principle of organization; the short-period effects are represented by a change in the shape of the curve and signify reacting effects which grow out of the principles of organization. Both types of changes are fundamentally influences of different elements of time which actually, in the real sense of market price, do not operate true to type but instead function as cross-types of incongruous time elements. For purposes of price trend analysis a separation of each type of change must be maintained in order to make possible the observance of respective effects upon the general price level.

Changes in the demand schedule in terms of complete shifts as well as in reacting short-time fluctuations are much less prevalent than are such changes in the supply schedule. Habits of consumption and available purchasing power change but gradually; especially is this the case when comparison is made with the rate of change in technical methods of production which serve to cover consumption. The demand schedule is relatively rigid since available purchasing power at any one time is practically inelastic. Hence, a study of demand phenomena in their relation to price trend requires primarily an investigation of oscillating effects from a schedule which is relatively fixed. Therefore as a structural force of social organizations, changes in demand are insignificant and so of minor importance in a study of future prices.

In the supply schedule precisely opposite effects can be observed. Instead of rigidity, there is elasticity; instead of limited oscillation, there are frequent shifts of the entire supply schedule. Only remote, if any, causal influence is attached to the short-time element in its relation to the organization principles of the industrial structure. The influences which operate upon cyclical swings of industrial activity are imbedded in cost combinations. They are technical in nature and represent changes in productivity which cause a complete shift in the supply schedule. In the long run these influences operate as principles of organization in the network of the structural foundations of society as a whole. Not as an element of time, but as an organization principle, is this shift to be conceived in order to recognize its relationship to conjunctures and price trend. A rapid rate of technical changes in production will generate a frequent shifting of the supply curve, marking a *re*-organizing influence of the industrial structure. It has been this influence of technique, of engineering management and consolidations of enterprise, which in the course of the last decade has been exerting an unusual pull upon the general price level. Industrial reconstruction following the war initiated a new pace in plant efficiency. A relatively con-

servative capital structure of a great part of the industrial plant held out opportunities to capitalize output on a price level approximating fifty per cent above pre-war. The lure of capturing at least part of this increment became a primary aim and permitted cost outlays for efficiency purposes which under circumstances of a relatively lower price level would have been impossible. Thus a stream of doses of efficiency factors, aiming toward constantly lower per unit cost of output, caused the supply curve to shift and reshift. In the practical aspect of industrial organization a structure of overcapitalized equipment was set up, which reached its saturation limits with the relative price level advantages offered and additional liabilities assumed. Fundamentally an economic *re*-organization had taken place upon an inflated level of prices; upon an indebtedness which increased with declining equities. Productive efficiencies through lower per unit cost had reached a margin of profitable returns—the margin beyond which costs of *re*-organization reacted upon the price level through supply.

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## THE CURRENCY OF CANADA

The Canadian currency is unique in that it has been permitted to develop naturally in response to the needs of trade and industry. It has not been burdened with political compromises which have commonly accompanied wars or other emergencies. Parliament, furthermore, has been content with a legal structure which has permitted it to be used effectively. Gold, as the basis of the credit structure, assumed a place of increased importance during the Great War due to the work of the Dominion in facilitating the movement of gold between the United States and her allies. Recently, Canada has become the second largest producer of gold thus adding to the importance of this commodity. The bank note is the outstanding feature of the currency system. It is issued at small cost and constitutes the circulating medium of the country. The fact that it is held as till money and paid out when cash is demanded accounts for the ability of the banks to operate branches at a profit in localities which are too small to support a unit bank.

### *Coins and Coinage*

As a part of the United Kingdom, Canada might logically have used the English system of pounds, shillings, and pence in designating its coins; but the influence of the French population in Quebec and the growing volume of trade with the United States, together with the inherent advantages of the metric system, led to the passage of an Act for the Province of Canada in 1853 which provided for a decimal currency with a dollar equivalent to the United States dollar. This was followed by a measure four years later that required all government accounts to be kept in dollars and cents. In 1871, the Uniform Currency act (34 Vict., c. 14) authorized a decimal currency for the entire Dominion, made the British sovereign legal tender for $4.8666, and the eagle of the United States legal tender for $10. It also provided for a Canadian five-dollar gold piece. The principles of this Act have been retained and elaborated in subsequent legislation as evidenced by the fact that all domestic coins are now identical in name, weight, and fineness with the corresponding coins of the United States and by the fact that the five, ten, and twenty-dollar gold coins of this country are legal tender in Canada at their face value.[1] No change has been made in the rate at which the British sovereign is legal tender, but this privilege has been extended to other British coins at rates proportionate to their gold content.

Gold is coined free or for private account, and the depositor is permitted to demand payment in Canadian coins or in British sovereigns. The former have been struck in denominations of five and ten dollars only. This coinage was begun in May, 1912, and continued for three years with an aggregate output of $4,867,905. The sovereigns are struck

[1] The Currency act of 1910 (9-10 Edward VII, c. 14) provides for the following coins: gold in denominations of two-fifty, five, ten, and twenty dollars based on a ten-dollar piece weighing 258 grains 9/10 fine; silver in one dollar, fifty, twenty-five, ten, and five cents based on a dollar of 360 grains 8/10 fine; a nickel of 70 grains pure nickel; and a penny containing 50 grains of mixed metal.

with a small "c" over the date as an identification mark and have constituted a considerable portion of the total coinage to date.

The subsidiary or small coins that circulated prior to 1908 consisted of foreign coins or of those struck in England for Canada and her provinces. The volume and character of those procured from England together with the output of the Ottawa mint is shown in Table I. The five silver coins authorized in the present currency act are identical in weight and fineness with the corresponding coins of the United States. The one-dollar piece, however, has never been struck. The silver five-cent piece, which was replaced by the nickel coin in 1921, and the old bronze coin, replaced by the present one in 1920, both circulate to a

TABLE I

STATEMENT OF COINAGE (IN DOLLARS AND CENTS DENOMINATIONS) ISSUED TO THE DOMINION OF CANADA, 1858–1931[1] (000 omitted)

| Year | Gold | Silver | Nickel | Bronze | Total |
|---|---|---|---|---|---|
| Struck at mints in England (1858–1907):[2] | | | | | |
| Maritime Provinces,[3] 1861–1871 | — | $ 95 | — | $ 60 | $ 155 |
| Canada, 1858–1907 | — | 12,460 | — | 804 | 13,264 |
| Totals | — | 12,555 | — | 864 | 13,419 |
| Struck at the Royal Mint, Ottawa:[3] | | | | | |
| 1907–1916 | $ 4,868 | 8,595 | — | 459 | 13,922 |
| 1917–1931 | — | 12,445 | 1,776 | 1,040 | 15,268 |
| Totals | $ 4,868 | $33,595 | $1,776 | $2,363 | $42,609 |

[1] Source: *The Canada Year Book*, 1932, p. 757.
[2] Struck at The Royal Mint in London, or at the Mint, Birmingham, Ltd.
[3] New Brunswick, Nova Scotia, and Prince Edward Island.

limited extent. The legal tender limits of the bronze, nickel, and silver coins are twenty-five cents, five and ten dollars, respectively.

As originally established in 1907, the mint was a branch of the Royal Mint of England. This plan was adopted to obtain the privilege of coining British sovereigns for which there was a wide demand.[2] Under this arrangement, the officials and operating technicians were sent from England and were subject to control from the Royal Mint, while the operating expenses were provided from the Canadian treasury. In August, 1931, an act was passed (21-22 George V. c. 48) whereby the Canadian branch was converted into the Royal Canadian Mint as a branch of the Department of Finance.

[2] For an interesting discussion of the establishment of the mint, see "The Canadian Branch of the Royal Mint" by Dr. James Bonar, *Journal of the Canadian Bankers Association*, vol. xxxix, no. 1, pp. 25-38.

Exclusive of the coinage just described, the volume and character of the mint's activity has depended upon the movement of foreign and domestic gold. When the Great War broke out in 1914, the United States began to make large shipments of gold to London to discharge obligations there which were not being renewed, but the dangers of navigation soon made the insurance rates prohibitive. To meet the situation, the Bank of England in September announced that arrangements had been made whereby the Minister of Finance in Canada would receive gold as trustee, and delivery to him would be considered equivalent to delivery to the Bank itself. As a result, a large amount of gold was soon sent by bankers and traders of the United States to the Minister at Ottawa, who held it subject to orders from England. International obligations were so changed in 1915 that England was under the necessity of sending gold to New York to pay for its large purchases of war materials. From the various parts of the world gold that normally would have gone to London was diverted to Ottawa, where it was refined and forwarded to New York. The refinery at Ottawa, which had been established in 1915, received 19,492,359 ounces of rough gold from South Africa alone for the account of the Bank of England. From this it produced 17,071,433 ounces of fine gold worth $352,897,359.[3]

Canada, in common with most countries, has been unwilling to permit domestic gold to respond to the free play of economic forces in recent years, but has subjected it to varying degrees of control. A relatively small amount of gold was sold at Ottawa so long as it was free to flow to the most profitable market, as may be seen by reference to Table II. In June, 1918, an embargo on gold export was put into effect thus bringing about a remarkable increase in the amount received at the mint. Due to the large premium on American funds, this action deprived the local producers of a profit that could be obtained if the gold were sold in the United States. To offset this loss, the government agreed to pay for gold at Ottawa in New York funds. This policy was followed with interruptions, until the latter part of 1923, when it was announced that after November, payments would no longer be made in New York funds although these funds were still quoted at a considerable premium. This action was protested, and the government agreed to permit the export of gold under a system of special licenses to be issued by the Minister of Finance. The small receipts at the mint in 1924-25 are proof that immediate advantage was taken of this permission. When the premium on American funds disappeared in the middle of 1924, producers wanted to ship to Ottawa, but the government refused to provide the funds for the purchase of the gold. Finally in December, 1925, the government

[3] James Bonar, "The Mint and the Precious Metals in Canada," *Journal of the Royal Statistical Society*, vol. lxxxiv, p. 229.

agreed to accept crude bullion and pay for it in Canadian funds. The larger annual output of the mint in 1926 and following years shows that it was then generally profitable to ship to Ottawa.

The war-time exchange control officially came to an end in July, 1926; thereafter gold could theoretically be moved freely whenever a profit could be made by such action. In practice, however, it was frequently not exported to the United States when it was clearly profitable to do so, especially in the years of 1929, 1930 and 1931, thus showing that an unofficial control existed. In October, 1931, an order-in-council, later approved by Parliament,[4] again brought gold under government supervision. The Minister of Finance was authorized to issue licenses to the chartered banks to make exports when necessary, but all other gold

TABLE II

VALUE OF GOLD BULLION RECEIVED FOR TREATMENT AND VALUE OF GOLD COIN AND BULLION ISSUED FROM OTTAWA MINT, 1908–31[1] (000 omitted)

| Years | Gold received | Gold coin issued | | Bullion issued | Total issued | Average annual output |
|---|---|---|---|---|---|---|
| | | Sovereigns | Canadian | | | |
| 1908–16 | $ 10,464 | $1,585 | $4,868 | $ 2,916 | $ 9,370 | $1,041 |
| 1917–18 | 5,776 | 637 | | 5,298 | 5,935 | 2,967 |
| 1919–23 | 74,364 | 833 | | 74,163 | 74,995 | 14,998 |
| 1924–25 | 4,791 | | | 4,755 | 4,755 | 2,377 |
| 1926–31 | 148,227 | | | 145,338 | 145,339 | 24,222 |
| Totals | $596,520[2] | $3,055 | $4,868 | $585,645 | $593,569[3] | |

[1] Source: *The Canada Year Book*, 1932, p. 757.
[2] Includes $352,898,246 of Bank of England gold received between 1915 and 1919.
[3] Includes $353,175,583 of Bank of England bullion issued between 1915 and 1919.

exports were prohibited. Under this arrangement, specie payment within Canada was maintained but gold exports were controlled. Finally, in April, 1933, an order-in-council suspended specie payment and shut off gold exports, thus abandoning the gold standard.

Gold circulates only to a negligible extent; practically the entire stock is in the custody of the banks and the Finance Department. The portion which belongs to the former is held either in their vaults in Canada or in their branches and depositories in foreign countries. They also hold some gold in the Central Gold Reserves. The major part of the gold held by the Finance Department is earmarked as a reserve against savings bank deposits or against Dominion notes issued under the Act of 1914. Against the former, the reserve is 10 per cent; against the latter, it is 25 per cent for the first $50,000,000 and 100 per cent against the remainder. Any amount held beyond these requirements is excess or free gold.

[4] Approved in May, 1932 in an Act respecting the Export of Gold (22-23 George V).

The reserves of the Finance Department are now composed very largely of bullion, as may be seen by reference to Table III. This change was made possible by the Dominion Note act of 1914 which provided that the reserve against these notes might be in the form of coin or bullion. Previous to that time only a coin reserve was authorized. As a result of this act, Canadian gold coinage was discontinued immediately, and the fine gold bar assumed a place of deserved importance. This was entirely natural because gold functions primarily as a reserve and as a means of international payment. When used for the latter purpose, bars are preferable because they are more easily handled, less subject to abrasion, and more quickly valued when received abroad.

TABLE III

GOLD RESERVES OF THE FINANCE DEPARTMENT[1] (000 omitted)

| Year | British coin | U.S. coin | Canadian coin | Bullion | Total |
|---|---|---|---|---|---|
| 1905 | $ 3,990 | $29,494 | $ — | $ — | $ 33,485 |
| 1910 | 6,304 | 68,261 | — | 222 | 74,788 |
| 1915 | 29,606 | 86,516 | 3,436 | 775 | 120,334 |
| 1920 | 26,728 | 35,896 | 3,387 | 35,090 | 101,101 |
| 1925 | 29,894 | 67,135 | 3,315 | 37,512 | 137,858 |
| 1930 | 30,634 | 28,748 | 2,733 | 34,096 | 96,212 |
| 1931 | 17,736 | 4,270 | 2,732 | 42,220 | 66,960 |

[1] Source: *Canada Year Book*, 1932, p. 758.

## *Dominion Notes*

Dominion or government notes secured by gold constitute the backbone of the Canadian currency system. At the one extreme, they supply the small paper currency for the daily conduct of business; and at the other extreme, they are the medium by means of which all inter-bank or clearing house balances are settled, including the daily redemption of bank notes. For the latter purpose, they are issued in large denominations or specials, good only between banks. They are legal tender in all amounts, and in ordinary times are freely convertible into gold. Issued by the government, they may be acquired by the banks either in exchange for an equal amount of gold or by borrowing under the Finance Act.[5]

Prior to the Confederation, currency was issued by the various provinces. Thus we find the forerunner of the Dominion Notes act in a statute of the Province of Canada (Ontario and Quebec) passed in 1866, entitled An Act to Provide for the Issue of Provincial Notes (29 Vict.

[5] The recommendation of the Macmillan Commission that a central bank be established in Canada is now being considered in Parliament. Under the proposed charter, this institution would immediately take over the issuance of Dominion notes. It would ultimately have the sole right to issue all circulating notes, the chartered banks being required to relinquish this privilege gradually over a period of years.

c.10). Drafted originally to compel the banks to relinquish the issue of their own notes, as finally passed it sought to offer sufficient profit to induce them to circulate the government notes in place of their own. For reasons not within the scope of this discussion, the Bank of Montreal alone retired its notes and accepted the offer of the government.[6]

Under the terms of the British North American act, 1867 (31 Vict. c. 3), the Parliament of Canada is given exclusive authority over all matters pertaining to currency, coinage, banking and related matters. In the exercise of this power with respect to currency, the government sought to provide the largest free loan possible and at the same time be in a position to redeem its notes in gold on demand. As a means of accomplishing these objectives, it retained a monopoly on the issuance of currency in small denominations by prohibiting bank notes in denominations of less than five dollars. (Originally four.) It provided further that bank notes could be redeemed in gold or Dominion notes and that the banks must hold 40 per cent of whatever cash reserve they held in Canada in these notes. These provisions are still in effect, although the need for them has probably ceased to exist.

The first Dominion Notes act (31 Vict. c. 46) was virtually a reenactment of the Provincial Notes act of 1866. Phrased in the same general terms, it applied to the whole of Canada. It stated that the $8,000,000 of Provincial notes authorized by that Act had been engraved and prepared for issue. Therefore they were declared obligations of the Dominion of Canada and made redeemable in specie on presentation at redemption offices established or to be established in Montreal, Toronto, Halifax, and St. John. They were made legal tender except at the offices at which they were made payable, and after having been redeemed, they could either be reissued as Provincial notes or be cancelled, and Dominion notes could be issued in their place to an equal amount. The circulation report shows that they have now all been cancelled except about $27,000.

Because of the limits of space, it is not possible to trace the development of the note from this humble beginning. Suffice it to say that changes have been made only as the needs of business dictated and as the proposed changes appeared to be practical. The last general revision of the Dominion Notes act came in 1914 (5 George V. c. 4), and we shall summarize its more important provisions.

Gold, which had formerly been limited to coins, is here made to include bars which bear the stamp of certain designated mints certifying to the weight and fineness at a valuation of one dollar in the currency of

[6] For a complete discussion see Breckinridge, Roefill Morton, *The History of Banking in Canada*, Senate Document No. 583, 61st Congress, 2nd Session, Washington, 1910.

Canada for every 23.22 grains of fine gold content. The partially secured issue is raised from $30,000,000 to $50,000,000, and the requirement of a reserve in securities is dropped; $50,000,000 can be issued against a 25 per cent reserve in gold, but all notes in excess of that amount must be secured by a 100 per cent gold reserve. If the reserve at any time proves insufficient or falls below the percentage required, the Minister is authorized to sell bonds to replenish it. The Minister is likewise permitted to establish branches of the Finance Department in the cities of Regina and Calgary for the redemption of the notes. A final clause continues the provision which declares the notes of the provinces of Canada to be notes of the Dominion and redeemable in gold when presented at the place where they are made payable. In the revision of the statutes in 1927, this act became the Dominion Notes act (R.S.C. 1927, c. 41); otherwise no important changes were made. In addition to this Act however, authority to issue Dominion notes is contained in certain other measures which we shall now explain.

The panic of 1907 provided the occasion for the first emergency legislation. The government, being convinced that the banks were so near the limit of their circulation privilege that they could not supply currency adequate to move the western grain crop before it was greatly damaged, ordered the advance of not over $10,000,000 in Dominion notes to them on the basis of securities in lieu of gold. Somewhat over $5,000,000 in these notes were actually loaned through the agency of the Bank of Montreal. The banks generally opposed this offer of help, and the facts show that it probably was not needed. The second emergency legislation came as a result of the act of Parliament in 1914 whereby the government was authorized to guarantee $45,000,000 Canadian Northern Railway debentures and $6,000,000 Grand Trunk Pacific bonds. Because of the difficulty experienced in selling the securities, due to the outbreak of the Great War, $16,000,000 in Dominion notes were issued against the pledge of $20,000,000 of these guaranteed securities and advanced to the railroads. The government itself advanced $10,000,000 of Dominion notes on its general credit to meet certain obligations which were about to mature. The Minister was severely criticized for this action of the government, but Parliamentary sanction was finally given in the Dominion Notes act, 1915 (5 George V, c. 4).[7] The outbreak of the Great War provided the emergency which resulted in the passage of the Finance act. As originally passed, it was a war measure, but that part which provided for the issue of Dominion notes was made permanent by a Supplementary act in 1923. Under its provisions the Minister of Finance is authorized to issue and advance Dominion notes to the chartered banks and to the two savings banks

[7] Hansard (5 George V,), 1915, vol. 120, p. 1528 *et seq.*

upon the pledge by them of securities and commercial paper in lieu of gold. But when issued the notes are redeemable in gold on demand and are identical with any other Dominion notes. In Table IV it may be observed that Dominion notes outstanding under the provisions of this act amounted to $57,488,000 on December 31, 1932.

The discussion may be summarized by an analysis of the circulation statement, a copy of which is shown as Table IV. Every month the government releases a similar statement, which is published in the *Canada Gazette* and in the various financial publications. In the first section, the circulation outstanding by denominations, including Provincial notes, is shown. In the second section is shown the statutory authority for

TABLE IV
THE CIRCULATION STATEMENT
DECEMBER 31, 1932

| | | | |
|---|---|---|---|
| Provincial | $ 27,593 | Statutory authority for issue | |
| Fractional | 1,289,133 | | |
| $1 | 19,406,789 | Chapter 4, 1915 | $26,000,000 |
| $2 | 13,264,140 | Finance act, R. S. 1927, Chap. 70 | 57,488,000 |
| $4 | 30,871 | | |
| $5 | 5,205,792 | Dominion Notes act R. S. 1927, Chap. 41 | 107,682,470 |
| $50 | 650 | | |
| $500 | 2,815,500 | | |
| $1,000 | 7,834,000 | | $191,170,470 |
| Legal tender notes for banks: | | Gold held by Minister of Finance— | |
| $1,000 | 1,000 | | |
| $5,000 | 8,245,000 | Against savings banks deposits (10% on $22,559,838.72) under the Savings bank act | $ 2,255,983 |
| $50,000 | 133,050,000 | | |
| | $191,170,470 | Against notes as required by Dominion Notes act, R. S. 1927 | 70,182,470 |
| | | In excess of statutory requirements | 605,959 |
| | | | $73,044,414 |

the various issues. Of the $107,682,470 outstanding under the Act of 1914 (now R. S. C. 1927, c. 41) $50,000,000 are authorized against a 25 per cent reserve ($12,500,000) in gold; the remaining $57,682,470 must be secured by a 100 per cent gold reserve. On this date, the Minister of Finance held gold as security for notes issued under this act amounting to $70,182,470, as may be seen by reference to section three of the statement. He also held $2,255,983 as a 10 per cent reserve against savings bank deposits. This left a balance of free gold amounting to $605,959. Under the authority of the Act of 1915, $16,000,000 in notes are authorized on the security of railway bonds; and $10,000,000 in notes for treasury purposes are based on the general credit of the government. The remaining notes, amounting to

$57,488,000 on December 31, 1932, are secured by collateral pledged under the terms of the Finance act.

### *Bank Notes*

Neither of the two parts of the monetary system so far discussed function primarily as a circulating medium. Gold, as the money of ultimate redemption and the basis of the credit structure, does not circulate to any considerable extent. The few outstanding Provincial notes, and Dominion notes in small denominations, circulate to the extent of between $30,000,000 and $35,000,000. But the principal part of the outstanding Dominion notes is held by the chartered banks in their vaults or in the Central Gold Reserves. The paper currency which serves as the medium of circulation has from the beginning been issued by the chartered banks.

This plan was adopted because of the peculiar conditions which existed when the banking system was founded. Here was a country of vast territorial extent, small population, and a limited amount of free capital concentrated largely in the financial centers. Land was the principal item of wealth, but the numerous land bank schemes of the United States had clearly revealed the defect of land as a security for commercial banks. Under these conditions, it was believed that a safe and adequate currency could best be secured by having a few strong banks in the financial centers issue notes solely against their assets and supply them to their branches in the outlying districts. There, they could serve as till money and be paid out or contracted in response to the needs of business. With the exception of minor safeguards and extensions made necessary by the changing needs of a growing country, this principle continues to function as one of the outstanding characteristics of the banking system.

Government control has never been exercised over the preparation of the notes nor over their distribution to the branches. Originally the law simply stated that they could not be issued in denominations of less than five dollars and that they must be redeemed by the issuing bank on demand in gold or in Dominion notes. By an amendment in 1890, the banks were made mutually responsible for the redemption of all outstanding notes. But as a means of self protection, they were authorized to assume control and administer all routine details of note circulation. The Canadian Bankers Association, therefore, has entire supervision over the preparation of the notes as well as their routine distribution to the banks and branches; it likewise has charge of their destruction when they are no longer fit for use.

It should be clear that a note becomes an obligation of a bank only when it goes into circulation. Government supervision, therefore, begins at this point with the declaration that a bank can issue notes only when

it has a certificate from the Treasury Board permitting it to do so. For a newly incorporated bank the certificate is granted when sufficient proof has been submitted that all the requirements of the law and rules of the Board have been complied with. In case a bank suspends payment at any time, its note issue privilege is automatically cancelled, and it can be revived only by a new certificate from the Board or by a written order from its curator authorizing it to begin business. This protective measure is necessary to prevent the dissipation of the security of other creditors by the issue of additional notes.

Since the volume of notes a bank has outstanding is vital to its solvency, the Bank act has always been very specific on this point, and it has likewise imposed heavy penalties for infractions of the law. Originally the volume of outstanding notes could not exceed the unimpaired paid up capital stock of a bank. But it has been found necessary to relax this restriction from time to time to meet emergencies, as our discussion will now show. The first extension occurred in 1908 in an act (7-8 Edward, c.7) which provided that during the crop moving season, from October 1 to January 31, of any year, a bank could issue additional notes to an amount not to exceed 15 per cent of its total combined paid up capital and surplus. As this excess circulation is subject to a tax of 5 per cent, it can be issued only after a "notice of intention" has been given the Minister. Furthermore, the amount outstanding each month thereafter must be reported regularly. In 1912 (5 George V. c.5), the period during which the excess circulation could be outstanding was extended for one month at each end of the period. That is to say, they could be issued on the first day of September and remain outstanding until the last day of the following February. This was found necessary because the demand showed itself earlier than October and also because additional time was needed to permit the excess circulation to be retired before the penalties applicable to over-issue in normal times became effective. Under the terms of the Finance act, the time during which the excess circulation could be outstanding was extended for the entire year of 1915; in subsequent legislation it was extended until August 31, 1920. The special privilege was then allowed to lapse, and the provisions of the law of 1912 again became effective.

In the 1913 revision of the Bank act, another increase in the note issue was provided for by the creation of the Central Gold Reserve for the deposit of gold or Dominion notes by the banks against which an equal amount of their own notes can be put into circulation. The Canadian Bankers Association is authorized to make rules and regulations for the operation of the fund, but the actual administration is delegated to a board of four trustees, three of whom are appointed by the Association and one by the Minister of Finance. Borrowing under the Finance

act may, through the subsequent deposit of the Dominion notes in this fund, result in an increased circulation of bank notes.

Naturally the notes may be issued in any and all parts of Canada. They may also be issued for circulation in any British colony or possession, if not contrary to the laws of the possession. When prepared for this purpose, they cannot be legally issued or reissued in Canada. They are redeemable at the offices or agencies of the bank in the place where they are intended to circulate, the redemption point being stamped across the face of the note. The manner of redemption, the rate of interest to be carried in case of insolvency of the bank, and all other routine matters are fixed by the Governor-in-Council.

One of the most striking negative characteristics of the bank note is the absence of the legal tender privilege. Under normal conditions, it is neither legal tender between a bank and its customers nor between banks themselves. However, under the provisions of the Finance act, it was given this privilege from September 3, 1914, to July 1, 1926. Furthermore, it is not secured by bonds or any other specific collateral; neither is a fixed reserve held by the bank for its redemption. There may be a specific deposit in the Central Gold Reserves, but if so, it is for the security of notes issued in excess of the bank's otherwise legal limit. Finally, the government does not guarantee the note in any way. It agrees to exhaust the circulation redemption fund if necessary, but beyond that, it assumes no responsibility expressed or implied for their redemption.

If doubt exists as to whether a note of this character will circulate, it may be dispelled by an explanation of the redemption system. By law a bank is required to redeem its notes at par at any of its branches on demand, regardless of where they are made payable. The act of redemption tends to contract the aggregate circulation and thus to provide an opportunity for the notes of rival banks to go into circulation. Moreover, the Dominion notes and gold with which they must be redeemed increase the reserves of the rival institutions and provide the basis for the issue of additional notes by them. The chance of increasing the circulation of its own notes through causing the redemption of those of rival banks is sufficient incentive to insure the prompt redemption of all notes. It is also sufficient to guarantee their circulation at par in any area where a branch is situated. In order to insure their circulation at par in localities where there is no branch, every bank is required to make arrangements for the redemption of its notes in the chief commercial centers of the Dominion. Originally, these centers were named, but in the revision of 1923, the designation of cities was discontinued in favor of the statement:

> . . . at the places at which the Governor-in-Council has established branches of the Department of Finance for the redemption of Dominion notes, and at such other places as are from time to time designated by the Treasury Board.

In 1890, two measures were introduced with the sole purpose of making the notes circulate at par even though the issuing bank may be insolvent. The first, designed to prevent their discount, because of delay in payment, provides that if a bank becomes insolvent all its notes outstanding at the time shall bear interest at the rate of 5 per cent per annum from the day of suspension until the day set by the proper official for their redemption. If the directors, liquidators, or other officials of the bank do not make arrangements for their payment within two months from the date of suspension, the Minister of Finance names a day upon which interest stops and upon which he will redeem them out of the circulation redemption fund. The fact that the face of the note plus accumulated interest is paid to the person who finally presents it causes it to be eagerly sought after as an investment. The second measure, designed to prevent discount because of doubt as to their ultimate payment, provides for a circulation redemption fund under the supervision of the Treasury Board. Omitting details of its establishment, this fund is adjusted as soon as possible after June 30 of each year, so as to make the amount to the credit of each bank equal to 5 per cent of its average note circulation for the preceding twelve months. It bears interest at 3 per cent per annum and can be used only for the payment of the notes of a suspended bank. The entire fund is liable for any notes that are not otherwise redeemed; and any deficit that may occur because of such payments is assessed against the other banks in proportion to their circulation. However, they cannot be called upon in any one year for an amount greater than one per cent of their average circulation as determined by the Minister of Finance. If a bank is being liquidated, the amount to its credit may be paid over to the proper officials if proof is given that satisfactory arrangements have been made to redeem its notes.

The relative freedom with which the notes can be issued guarantees that the supply will be adequate for all normal requirements. Originally, the paid-in capital stock of a bank was the ultimate limit on the amount that could be issued. Moreover, it was large enough to permit whatever seasonal expansion was needed. Beginning in 1908, however, it was found more economical to permit an additional issue of notes not to exceed 15 per cent of the capital and surplus for crop moving purposes in certain months of each year than to require a large permanent addition to the capital. Finally, under the Finance act as now operated in connection with the Central Gold Reserves, the only legal limit on expansion is the existence of paper deemed sound under this act. Contraction is guaranteed by the self interest of the various parties. It causes the business man to pay off his loan as quickly as possible; it likewise causes the banker to hasten the redemption of all rival notes that come into his possession. Finally, because of the heavy tax involved, it prevents the banker from resorting to the excess issue privilege provided in the law

of 1912, and from borrowing under the Finance act unless there is a need that cannot otherwise be met.

A circulating medium provided in this manner is most economical. It can be prepared and distributed to the branches at a negligible cost. To procure a metallic coinage or even a bond-secured currency of equal volume would require an original outlay many times greater. In fact, a bank would be obliged to exchange an amount of its earning assets equal to the volume of circulating medium acquired. But except by the merest accident the entire amount could never be put into circulation at any one time. To the extent that it remained unused in the tills of the bank, operating costs would be increased. The significance of this point is important. It is the cheapness of the notes that enables a bank to operate branches in small communities under highly competitive conditions. The till money consists of bank notes which represent only a small investment in paper and engraving. When a customer demands money, he is invariably paid in these notes and they go into circulation as the obligation of the bank. While they are outstanding, they are returning a profit to the bank and serving the needs of the borrower. When they are no longer needed, they are forced back for redemption and again become inexpensive pieces of paper.

So far as the ultimate safety of the note is concerned, not the slightest doubt need exist. The note with any interest that may have accumulated because of insolvency, is a first claim on the entire assets of a bank. Since the beginning of the Confederation, the assets have always proved sufficient to meet this claim; and so long as the daily redemption system is maintained, it does not seem possible that a bank could force into circulation enough notes to make the assets insufficient for this purpose. A further safeguard is found in the circulation redemption fund and in the double liability of the shareholders. The latter has recently been made more valuable by certain restrictions designed to prevent fraudulent transfers in anticipation of insolvency. Furthermore, the statutory note circulation report, coupled with the system of government inspection, appears as an additional guarantee of ultimate redemption.

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## COMMUNICATIONS

# Gold, Debt and Prices

Because of the recent appearance of an American edition of Mr. F. W. Hirst's *Money: Gold, Silver and Paper,* I should like to comment upon a quotation he has included, both in the English and American editions, from a letter I wrote him in November, 1932. I said:

"What one might call the price of gold, *i.e.,* the amount of goods that must be given up to get gold, is very high. That cannot be because of any lack in the supply of gold, because the supply is very large, indeed abnormally large. It must therefore be due to an enlarged demand for gold. Is there such a demand; and if so, what precisely is its cause and nature? I cannot see that there is any such demand for gold, or representatives of gold, for use as a medium of exchange as would explain this high 'price' of gold. If a man with cotton goods to sell wants an automobile, he must of course give up a large amount of goods for a given amount of gold, but on the other hand he needs much less gold than he used to need to buy the automobile. His desire to make a sale of one kind of goods in order to make a purchase of another kind does not account for the enormous demand that must evidently exist to account for the large amount of goods universally required to get gold.

"Where then does the demand come from? It comes from debtors who, of course, cannot pay their debts with any commodity but gold, and who therefore seek gold persistently, bidding for it higher and higher in order to avoid defaults, bankruptcies, and foreclosures."

Of course debt was not the only cause of the fall in prices. As Mr. Hirst points out, there was a demand for gold to hoard, and one may be sure that prices would have fallen even if there had been no debt—if one can suppose that without debt there would have been a world-wide depression.

So long as we were on the gold standard, it would still have been necessary to effect the exchange of goods through gold or its equivalent; and the owner of gold or representatives of gold would have been on the advantageous trading side, because depressions so curtail demand for other commodities.

With all the qualifications, however, that I can attach to what I wrote Mr. Hirst, another year's observation from a bank desk has only strengthened my conclusion that the pressure of debt was the greatest of the forces that drove commodity prices down.

Much of what I have said about gold would of course apply to silver or paper. If markets are shut off, debtors must bid up for whatever money there is to pay debts with; that is, they must offer their own wares down. If the money is paper, the issue may be increased, in which case commodity prices may not fall so far. If irredeemable, the supply of paper money might even grow so fast that prices of goods would not drop at all, might even rise, and then there would be a boom; but so long as people believe that the money standard will be maintained, debtors, in a depression, will be at a disadvantage in exchanging their goods for the money they need to pay their notes and mortgages.

I add a paragraph from my letter that Mr. Hirst did not quote:

"The quantitative theory of gold is valid, but it is too frequently expressed as if the price level at any given time were simply a ratio between goods and gold. Certainly the demand for gold for the purpose of settling former trans-

actions enters into the equation of prices and gold, and I am inclined to think that that fact can usefully be pointed out."

On the other hand, the creation of debt, by providing additional equivalents of gold, has of course frequently forced the value of gold down and the price of commodities up.

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## Bibliography of Professor Thomas S. Adams

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*Lectures on Taxation* (in collaboration), in *Columbia University Symposium, 1932,* edited by Roswell Magill, New York, Commerce Clearing House, Loose Leaf Service Div. of the Corporation Trust Co., 1932.
*Report of Committee on Taxation,* T. S. Adams, Chairman, in the *President's Conference on Home Building and Home Ownership,* vol. 2, pp. 102-268, Washington, 1932.
*Monetary and Fiscal Policies,* in *Proceedings of the Acad. of Pol. Science,* 15: 192-195, Jan., 1933.

## General Works, Theory and Its History

*The Theory of Unemployment*. By A. C. Pigou. (London: Macmillan. 1933. Pp. xxv, 319. $5.00.)

In one sense this book is a companion volume to the author's *Industrial Fluctuations*, published in 1926; in another it is the summation of one economist's tentative conclusions regarding a controversy which has engaged the attention of European economists for some years—the relation of wage-rates to unemployment. Addressed to economists, it is essentially a marginal productivity analysis premised upon a "simplified model of the economic world," which upon examination is found to carry some of the assumptions of the *static state*. The implications of these assumptions, thanks to the use of some mathematics, are skillfully diagnosed, and the argument as a whole is a keen, penetrating piece of analysis, worthy of the best Marshallian tradition.

The core of the theory is this: If labor were perfectly mobile and if there were free competition among workers for jobs, there would be a tendency for wage-rates to be so related to the demand for labor that everyone able to work and willing to work would be employed. The contribution of the study arises from the analysis of the elasticity of the demand for labor under a variety of circumstances. Demand for labor is considered under competition, monopoly, depression, prosperity, in one region as against another, in one industry as against another, for one type of commodity as against another, for short-time and long-time periods, in relation to interest rates, to the state of the industrial arts, and to the composition of the population, to mention only some items. These contrasts are all made in terms of wage-goods, by which the author means the quantities of goods paid as wages, thus avoiding the difficulties involved in the construction of an index number of "real" wages. The "monetary factor" is introduced later to show the effects upon labor demand of changes in the real rate of interest (cost of borrowing wage-goods to pay workers), of changes in the volume of bank credit, of fluctuating exchange rates, of changes in the general price level, and of other factors.

The implications of Pigou's analysis are many. Particularly significant and timely are some of his conclusions relative to taxation, social services, and public works. Consider this one: "All gratuitous payments to poor people and all social services, in so far as they are financed at the expense of the richer non-wage earning classes, whatever benefit they confer on the community in other respects, of necessity reduce *pro tanto* the quantity of labor demanded at a given real wage-rate" (pp. 155-156). This conclusion, of course, depends upon the assumption along

with others, that more labor is employed in making non-wage goods than in making wage-goods; that is, in making luxuries instead of necessities. As short-run expedients, Pigou admits the advisability of following many practices which his analysis condemns as permanent policies.

Many of Pigou's conclusions will not be acceptable to liberals sponsoring the social services, nor to trade unionists whose wage policies are pictured as causing unemployment. Critics of the marginal school will find the analysis too incisive to harmonize with the business man's inadequate cost accounting systems and his inability or unwillingness to weigh carefully the economic factors involved. Monetary cycle theorists will look askance at the reasoning of one whose theory of the business cycle settles down to the "mutual generation of errors of optimism and errors of pessimism." Still others will feel that Pigou is placing too much emphasis upon deflating labor to the advantage of bondholders and landowners.

These criticisms will not be well-founded, in the opinion of the reviewer, if one recognizes that Pigou himself does not pretend to solve the questions of immediate policy and that his analysis throughout is qualified as applying within his assumptions. At a time when economists and laymen alike are glibly advocating this or that government measure to deal with unemployment and other ills of the day, it is refreshing to find an able thinker like Pigou still engaged in the study of economics.

Professor Pigou has prepared a printed slip of misprints which may be obtained from the publishers without charge.

EDISON L. BOWERS

*Ohio State University*

*Emile Durkheim on the Division of Labor in Society: Being a Translation of His De la Division du Travail Social with an Estimate of His Work.* By GEORGE SIMPSON. (New York: Macmillan. 1933. Pp. xliv, 439. $3.50.)

The translation is made from the first (1893) and fifth (1926) editions, and includes the preface to the first, the preface to the second, and the complete introduction to the first edition. The last is nowhere else available in print. Since all the various portions of the whole work are for the first time included in a single volume, and since the translating has been done with exceptional skill, judgment, and lucidity, a really important study has been adequately presented to the English reader.

Durkheim (1858-1917) is well known to American sociologists, but economists have remained largely unaware of the nature of his work. This review will be limited to pointing out some of those aspects of the book which are especially significant to the economist.

By "division of labor," Durkheim does not refer, as economists usual-

ly do, to a device for increasing productivity. He uses it as a sociological concept, denoting cultural as well as occupational specialization, inevitable in the progress of civilization. "For us, this greater productivity is only a necessary consequence, a repercussion of the phenomenon [of the division of labor]. If we specialize, it is not to produce more, but it is to enable us to live in new conditions of existence that have been made for us" (p. 275).

The argument of the book is based on Durkheim's fundamental proposition that this specialization, although differentiating individuals, results not in political and economic individualism, but in social solidarity. For the primitive and frontier societies, in which individuals may pursue their self-interest with less public restraint, lack social cohesion, as is evidenced by the predominance of revengeful and repressive law. The progress of the division of labor is accompanied by the gradual withdrawal of the "punishment" motive in law, with the consequent substitution of restitutive for repressive legislation. This substitution represents a diminution of conflict and an increase in the spirit of coöperation. Thus, in the advanced state which we are now only beginning to realize, the specialized individual, even though merely engaged in routine tasks, becomes an understanding member of a conscious society. Rational participation, in his own small way, renders him a free contributor to the vast movements of historical society. "As special and uniform as his activity may be, it is that of an intelligent being, for it has direction, and he knows it" (p. 373). Thus he acquires significance as well as the happiness of real accomplishment. Therefore he is more truly free than is the more primitive individual who, like a lone wolf, appears to be free and independent but is in reality hemmed in by immutable forces which he does not understand and which will conquer him inevitably. "It is, accordingly, a real illusion which makes us believe that personality was so much more complete when the division of labor had penetrated less" (p. 404).

The validity of this argument is questionable on the basis of its particularism. Durkheim sees the progress of civilization only as an advancing division of labor, and considers only conflicts between individuals and society. He brushes aside, as identical in pattern, group and class conflicts. Thus he presents a lopsided view of social change. Nevertheless, in spite of this lack of balance, the book is of unusual economic significance in two ways.

To those who bewail the stultifying influence of machinery upon the worker, Durkheim gives an answer which cannot be ignored. Certainly, in this age of machinery, "scientific management," and social research, his argument has acquired an importance far greater than it had in 1893. Whereas it cannot be said that the truth of his answer has as yet been

demonstrated in actuality, the power of his reasoning convinces the reader that there may be much of valid prophecy in it. Certainly, Durkheim offers us hope for an ultimate escape from our dilemma of machinery.

To those, also, who fear the threatened "regimentation" and "levelling" of socialism, this book will prove illuminating. Durkheim never called himself a socialist, but in this volume he provides the modern socialists with a weighty and useful point of departure, for he demonstrates that collectivism is not inconsistent with (is even essential to) the full development of free individualism.

WILLIAM S. HOPKINS

*Stanford University*

*Methods in Sociology: A Critical Study.* By C. A. ELLWOOD. (Durham: Duke Univ. Press. 1933. Pp. xxxiv, 214. $1.50.)

Social scientists seem to devote more attention to methodological problems than do the natural scientists. Whether this is an indication of scientific interest and caution, of immaturity and *naïveté* in the social disciplines, or of fundamental conflicts in philosophy which must be resolved before social science can, if ever, become really scientific, is difficult to say. In economics, methodological discussion probably does not claim as much attention as it does in sociology and as it formerly did in history. To be sure, we have our "schools," which differ, nominally at least, not only as to technique and method, but also as to their concepts of the fundamental nature and limits of economics. In economics, however, as in the other social disciplines, there has been a popular and to a degree uncritical drift to the dictum that nothing is science which is not measurement, and that accordingly no economic thought or research is "scientific" or "objective" which is not done quantitatively and inductively. The old-time subjective psychological economics is in disfavor, supplanted by "objective price analysis," mathematical and statistical. If, on the other hand, there are sociologists who hold that all sociological investigation and theory must be in terms of materialistic phenomena and behaviorism, no serious attempt has been made to cram economics into a behavioristic mould. Professor Ellwood's attack on behaviorism as framework of scientific method in sociology thus has less point for economists than some other phases of his discussion.

The whole book is suggestive and stimulative, and will doubtless raise points of dispute in the minds even of those sociologists who are inclined to agree with the author's fundamental contention that the social sciences, including economics, cannot possibly confine themselves to "objective" phenomena, to the neglect of cultural complexes and values.

In values, that is in sentiments (though Professor Ellwood does not

sufficiently emphasize the fact that all values are fundamentally a matter of feeling or sentiment, rather than of intellect or reason), we have the pivot on which turn the questions, whether any "science" can deal with value "judgments," and whether any social "science" which attempts to ignore and exclude value judgments or sentiments is worth while. The reviewer is convinced that neither sociology nor economics can avoid considering value judgments (which involve the whole cultural and institutional set-up) as data; for these value judgments or preferences or sentiments, however subjective and however unamenable to quantitative treatment they may be, play a constant rôle both in economic life and in the social process at large. This is not saying, however, that either the economist or the sociologist is called upon to *make* value judgments, "scientific" or otherwise. The fact remains that all economists and sociologists *do* make such judgments ("take sides") though the more canny of them may refrain from explicit statement.

The reviewer is unable to follow Professor Ellwood in his contention that ethics can be made an objective science of norms. The "general agreement" on fundamental values, upon which both Ellwood and Hobson rest their case, does not exist.[1] Whether it is better to be "scientific" at cost of ruling out of consideration all value judgments, or at least of never daring to express a value judgment of one's own, or to hope that ultimately ethics, welfare, can be brought within the field of "objective" science, is perhaps a valid question. Perhaps, on the other hand, it might be better to be less impressed by the "science" bugaboo, to confess frankly our subjectivity, and to give up the chimerical idea that social science can ever be natural science.

A. B. Wolfe

*Ohio State University*

*Le Salaire, l'Evolution Sociale et la Monnaie.* By François Simiand. Vols. I-III. (Paris: Alcan. 1932. Pp. xxxii, 586; 620; xliv, 152. 200 fr., the set.)

Professor Simiand's well known *La Méthode Positive en Science Économique*, now nearly a quarter of a century old, was the promise; the three volumes on wages under review are the fulfillment. Henceforth the defenders of orthodoxy must refrain from mocking their "institutionalist" adversaries (for Simiand is undoubtedly a French "institutionalist") with the phrase, "By their fruits ye shall know them." Here, indeed, in Professor Simiand's study of wages are fruits of heroic proportions!

No review of such a book as this can possibly dispense the reader from the necessity of referring to the three volumes themselves, at least to

[1] See "On the Content of Welfare," *American Economic Review*, June, 1931 (XXI), pp. 207-221.

those portions which the author, in a whimsical note on page x, recommends to readers who have only "an hour or two" to give. In brief, the object of the book is to present a sample application of the positivistic experimental method. The phenomenon to which it is applied is the movement of wages in France from the close of the eighteenth century down to the present day. This method, the author tells us, is to be sharply differentiated, both from recourse to "theories without facts" and from blind reliance on "facts without theories." He does not deny the value of hypotheses; but, since hypotheses are liable to abuse, he prefers to work without any preconceived ideas and to be guided solely by "reasons drawn from the facts themselves and from the possibility of learning the facts." Moreover, the range of facts is not confined to the conventionally economic but extends to the sum total of sociological phenomena. Thus under the triple aegis of Bacon, Comte and Durkheim, Professor Simiand sallies forth, and traversing a well nigh impenetrable forest of statistical data, arrives at the following conclusions: (1) the primary impulses starting wages in France on their upward course in the nineteenth and twentieth centuries were (a) the discovery of the gold mines of California, the Transvaal and the Klondike and (b) the fiduciary inflation of the period; (2) the working classes of France were saved by the American Civil War from the misery to which they seemed condemned through the first half of the nineteenth century; and (3) the definitive amelioration of the condition of the French working classes at the close of the nineteenth century was initially due neither to the expanding productivity of industry nor to the progress of civilization, but to *alcoholism.*

The author pleads with the reader not to judge these astonishing conclusions *a priori* without examining the facts which he marshals in their support. If, indeed, this explanation of the movement of wages based on the facts of a given time and a given place runs counter to current expectations, may it not be that something is wrong with the expectations and particularly with the wage theories on which these expectations are based? To both the subsistence and marginal productivity theories of wages, Professor Simiand attaches the epithet "conceptual (or ideological)," which is as much as to say,

"A plague o' both your houses!"

Only a carping critic would take exception to Professor Simiand's *simpliste* presentation of the marginal productivity theory of wages given in a footnote to page 550 in Volume II. That is a minor matter after all, since a more accurate presentation revealing the marginal productivity theory as part of the theory of general equilibrium would still be "conceptual (or ideological)," or worse, would only show "*interdépendences.*" And it would be a stubborn, caviling adherent of systematic,

conceptual analysis who might point out that Professor Simiand's inquiry has nothing to do with the theory in question, which never pretended to explain secular changes. Our author simply runs true to the positivistic ideal of "restricting science to the study of existence and denying the possibility of normative science" (M. R. Cohen, *Reason and Nature*, p. 343).

The author's methodological position is set forth in his introduction and in the "postface" of Volume II. It is, furthermore, a leitmotif that runs through the whole work. In Book I, we plunge into the subject proper, wages. Here the author attempts to give a "positive" definition of wages, one based on existential phenomena; and he indicates how the order of his inquiry is determined by the availability of the data. Book II carries us through an exhaustive examination of the statistical and other documentary sources of data relating to wages, closing with a description of the general movement of wages. Book III examines the concomitant phenomena, non-economic as well as economic, concluding with a "rational, most approximative, general explanation." It is here that the author interprets his results and has recourse to a *homo oeconomicus* acting under the sway of what Veblen would have called pecuniary motivation. As a result of sociological conditioning the wage-earner looks not to real wages but to money wages, and measures his remuneration in terms of monetary units rather than the commodities he can buy with these units. Finally there is a whole volume, Volume III, containing elaborate, though overcrowded, graphs, bibliographical and statistical appendices. This volume is an invaluable annotated guide and reference book to statistical sources not only of French wage data, but of all the economic and sociological data which Professor Simiand has studied in their relation to wages.

WILLIAM JAFFÉ

*Northwestern University*

NEW BOOKS

ATKINS, W. E. and WUBNIG, A. *Our economic world.* (New York: Harper. 1934. Pp. 420. $1.68.)

A textbook in economics for high schools, including a study of the NRA program.

BELLINI, L. *Saggio di una teoria generale della società.* Vol. II. *La dinamica sociale.* (Milan: "Vita e Pensiero." 1934. Pp. xiii, 415. L. 30.)

BOSWELL, J. L. *The economics of Simon Nelson Patten.* (Philadelphia: Winston. 1934. Pp. 156.)

COLE, G. D. H. *What Marx really meant.* (New York: Knopf. 1934. Pp. 309. $2.)

DIEHL, K. *Die Grundbegriffe der Volkswirtschaftslehre.* (Jena: Fischer. 1934. Pp. x, 170. RM.7.)

DOUGLAS, P. H. *The theory of wages.* (New York: Macmillan. 1934. Pp. xx, 639. $5.)

DUTT, S. C. *Thirty-five years of Indian economic thought, 1898-1932.* (Calcutta: Author, 18 Annada Benerjee Lane. Pp. 20. Re. 1.)

A bibliography.

ELSAS, M. J. *Volkswohlstand und Volkseinkommen: Messung des Wohlstands und Dynamik des Lohns.* Probleme der Konjunkturforschung, Heft 1. (Leipzig: Hans Buske. 1934. Pp. 90. RM.4.60.)

GRAZIADEI, A. *Les variations de la rente et la propriété de la terre.* (Paris: Rieder. 1933. Pp. 192. 20fr.)

The variations of land rent under various changes in demand and supply, of land itself and of the products of land, and under the influence of technological and other changes, are analyzed theoretically. The author rejects the concept of no-rent land, not on the ground that all land, even down to the worst grade, may be in use, but on the ground that such a concept is "pseudo-mathematical." In other words, the use of land is never driven to the theoretical margin. Upon this assumption, is erected an argument for the existence of an "absolute" rent paid in equal amount by all land whether good or poor.

The most interesting derivative of this line of reasoning is a rejection of the Ricardian conclusion that a lowering of demand will cause a decline in land rent. If the author's contention that the opposite is true—that a decline in demand is likely to raise rents—can be sustained, the analysis may have some practical bearing on current administrative plans to take "marginal" land out of cultivation. Although the contention rests on a very dubious assumption, the view that Ricardo and Marx neglected the demand side of the problem has point.

A. B. W.

JAMES, C. L. *An outline of the principles of economics.* College outline ser. (New York: Barnes and Noble. 1934. Pp. 263. 75c.)

JANZEN, C. C. and STEPHENSON, O. W. *Everyday economics: a study of practices and principles.* 2nd ed. (Newark: Silver Burdett. 1934. Pp. xiii, 510. $1.68.)

An elementary text for high-school students. Contains questions, problems for discussion and references.

MEADE, J. E. *The rate of interest in a progressive state.* (New York: Macmillan. 1933. Pp. x, 115. $3.)

This little book is hard reading; and the reviewer is not disposed to affirm that it will adequately repay the effort for more than a small circle of readers. The author disarms criticism, however, by confessing that it is only a preliminary presentation of an incomplete chain of thought, offered to stimulate discussion.

Starting with the well- known thesis of Messrs. J. M. Keynes and D. H. Robertson that maladjustments between saving, investment, and spending are at the root of booms and depressions, Professor Meade undertakes an analysis of "the equilibrium rate of interest": *i.e.*, the changes in "the" rate of interest that are necessary to maintain or restore equilibrium in economic activity under the impact of changing economic conditions. Such contributions as the book makes are largely potential rather than realized. These relate chiefly to suggestive variations of cost, profit, and income concepts, but they are not adequately developed.

In the realm of capital and interest proper, the treatment leaves much

to be desired. Virtually no attention is given to the nature of capital and to its degree of mobility. Despite the great practical importance of durable consumers' goods, inventories of all kinds, and of fluctuations in repair and maintenance outlays, the consideration of changes in capital expenditures is largely limited to those of durable producers' goods. No illuminating distinctions or interrelations are established between money rates proper and interest rates. The author's discussion of the motives for saving and spending is not nearly as adequate as Boehm-Bawerk's.

Professor Meade makes little attempt to emulate other members of the Cambridge school in the wealth, and often wit, of their illustrative material and phrasing; nor does his treatment share their comprehensive and illuminating references to contemporary problems. On the contrary, an unnecessarily large part of his small monograph is devoted to rather obvious and mechanical applications of the Keynes-Robertson thesis to a highly simplified hypothetical economy.

In brief, the book contains several interesting germs of thought, but less fertile fields absorb the larger part of the author's attention.

LAWRENCE H. SELTZER

MÖNCH, H. *Preisgestaltung und Umsatztätigkeit auf dem industriellen Arbeitsmarkt.* (Jena: Fischer. 1934. Pp. xii, 168. RM.8.)

MORGENSTERN, O. *Die Grenzen der Wirtschaftspolitik.* (Vienna: Springer. 1934. Pp. vii, 136. RM.4.80.)

PETER, H. *Grundprobleme der theoretischen Nationalökonomie: Wert, Preis, Profit.* (Stuttgart: Kohlhammer. 1933. Pp. ix, 204. RM.9.)

SPENCE, W. *Tracts on political economy.* (New York: Viking Press, privately printed. 1933. Pp. xliv, 265.)

In 1807, a twenty-four year old entomologist published a tract entitled *Britain Independent of Commerce* to which James Mill replied in *Commerce Defended.* But William Spence, the author of the tract, was not persuaded by Mill's criticism. Instead of abandoning the neo-physiocratic beliefs which he had adumbrated, he elaborated them profusely in a joint reply to Mill and the "Edinburgh Reviewers" which he called *Agriculture: The Source of the Wealth of Britain* (London, 1808). Seven years later, when the "Corn bill" was the subject of great controversy, Spence defended agricultural protection in *The Objections against the Corn Bill Refuted.* In 1822, he republished his three tracts in a volume called *Tracts on Political Economy.* This nineteenth-century book, savoring of the eighteenth, has been reprinted in the twentieth century through the benevolence of Elisha M. Friedman with the hope (expressed in a foreword) that Spence's essays might light the way out of the morass of our present depression.

Students of the history of economic thought will be delighted with this admirable replica of Spence's tracts; but in fairness to Mr. Friedman the possible relation of Spence's ideas to present economic problems should be mentioned here rather than the historical value of the new edition. A familiar note is found both in Spence's catalogue of complaints and in his remedial proposals. An advocate of protection, Spence insisted that England, because of the growth of manufactures, had reached the happy stage which Hume had predicted, could now be "independent of commerce," and should therefore eschew both the fallacious virtue

of foreign trade, which mercantilists had exaggerated, as well as the doubtful benefits of free trade. Thus he seemingly breaks with both mercantilists and classicists. Give farmers the benefit of a home market monopoly, restrain imports, stimulate a demand for British-made luxuries, encourage domestic industries by an adequate paper money circulation (Spence adhered to the "banking school"), and dear bread and high wages will produce a régime of high prices which will make the national debt (greatly enlarged by the war) bearable. All this sounds modern. But back of Spence's economic nationalism lay a dogmatic physiocratic justification. Since land was the "source" of all wealth and the bearer of all taxes, economic policy must concern itself first with agricultural relief and agrarian security. Farmers have been "duped" by the "exporting manufacturers" (would this be "bankers" in 1933?) long enough. Strangely enough, although Spence, the physiocrat, belabors the mercantilists, in more ways than one, he is of their mind; so are modern advocates of economic nationalism. But, of course, it may be that economic nationalists were and still are right!

E. A. J. Johnson

Vito, F. *La concezione biologica dell'economia: considerazioni sul sistema del Marshall.* (Milan: "Vita e Pensiero." 1934. Pp. ix, 70.)

Wagenführ, H. *Der Systemgedanke in der Nationalökonomie, 1933.* (Jena: Fischer. 1933. Pp. 384. RM.17.50.)

This volume deals with the history of economic thought, but in a particular sense. It does not report details of doctrine expounded by leading economists of the past; neither is it confined to a consideration of economics as a science. Instead, as the title indicates, it centers attention upon the idea of systems which give economic facts and relations unity. In the main these systems are discussed, although about 50 pages deal with economic speculations antedating the seventeenth century, while on the other hand about as much space is assigned to the question whether any system can be deemed logically valid, and if so, on what grounds.

The reader thus is naturally disposed to ask at the outset: What is meant by "systems," and how are they conceptually anchored? Early in the survey a definition is submitted, yet only to be much modified, not to say rejected, by subsequent distinctions. For instance, some 40 systems are ascribed to recent economists writing in the Romanic languages, about 30 to those speaking German, and more than 20 to Anglo-Americans. Going over these lists, one finds systems characterized as marginal, legal-social, neo-classical, realistic-synthetic, historical, liberal, marxist, teleological, mathematical, and so on—pointing to lines of demarcation different from those announced on pages 15-19, and seemingly applicable only to latest developments in economic thinking.

Most chapters are introduced by quotations from the works of well known scholars, economic or otherwise. Correspondingly the title-page itself might have carried a stanza from Goethe's *Faust,* as follows: "With words we start an argument, systems of thought we thus invent; in words we pin our faith as if, in these alone the truth could live." For that appears to be, after all, the upshot of the entire study, *viz.,* that systems come and go, that nomenclature takes the place of demonstrable verities in economics, and that forever economists will have to argue in the abstract, or at any

rate interpret without hope of agreement even the essentials of their subject-matter. Resigned to this conclusion, one can follow Wagenführ's analysis with interest as well as with respect. Its scholarship cannot be disputed, nor the abundant evidence of a skillful use of relevant literature, nor its dispassionate evaluation of all systems, which indeed gives one hardly an inkling of what the author himself thinks of them, or how he would go about bringing order out of what looks like chaos.

O. Fred Boucke

Wagner, D. O., editor. *Social reformers: Adam Smith to John Dewey.* (New York: Macmillan. 1934. Pp. xvii, 749. $3.25.)

Readings from 33 authors who have influenced the trend of opinion on social and economic problems. Readings from each author are prefixed by brief biographical sketches. The selection includes Adam Smith, Malthus, Ricardo, Sismondi, Robert Owen, Fourier, Louis Blanc, Kingsley, Proudhon, Herbert Spencer, Comte, Mill, Marx, Henry George, Lenin, Rocco, Veblen, Tawney and John Dewey.

*Etudes économiques.* Vol. III. *Thèses présentées à la "Licence en Sciences Commerciales" en mai 1933.* (Montreal: Beauchemin. 1933. Pp. 440. $2.50.)

*A London bibliography of the social sciences: first supplement, 1st June, 1929, to 31st May, 1931.* (London: London School of Econ. and Pol. Science. 1934. Pp. xii, 596.)

Note has been made of the valuable catalogue of the library of the London School of Economics in the *Review* June, 1931, p. 290, December, 1931, p. 709, and March, 1933, p. 102. A supplement has now appeared covering the additions from June 1, 1929, to May 31, 1931. Titles are arranged by subjects and authors. The entries include not only books in the library of the School of Economics but also those in eight other libraries located in London.

## Economic History and Geography

### NEW BOOKS

Beard, C. A. and Smith, G. H. E. *The future comes: a study of the New Deal.* (New York: Macmillan. 1933. Pp. xii, 178. $1.75.)

The authors regard the present tension as the cumulative result of great technological advances in society without corresponding changes in our ruling political and economic ideas, the latter having remained "appropriate to the age of the tallow candle and ox cart." They analyze the legislative framework of the New Deal broadly—in the light of world history, and not merely as a "battle of political kites and crows." It represents itself to them essentially as a departure from the past, "at best . . . only the beginning of a transition," and as the opening of another period in American history. They present facts—pertinent, useful, authoritative facts—in a judicial way, as they relate to fundamental social forces and to the aims and possibilities of the New Deal; not as they relate to our immediate economic past, clashing interests, or opposite schools of political and economic thought. They trace the forces behind the New Deal from the collapse of the stock market in 1929 to the inauguration of President Roose-

velt, including the course of commodity prices, national wealth, unemployment, farm indebtedness.

The authors describe the ten principal aspects of the recovery program, under which they include the acceptance of industrial combinations as an inevitable development, the recognition of the rights of labor to collective bargaining and participation in the working of the programs, reasonable economic security, social insurance, the surrender of the conception of foreign trade as the only outlet for economic surpluses, and the refusal of the method of income distribution through the system of price and wage competition. They describe the agricultural recovery problem as "amazing," seeing that without infringement upon the system of individual ownership the government has so interpenetrated the procedures of agriculture as to gather under its control production, processing and marketing of almost every agricultural product including credit institutions adequate to meet the needs of agricultural finance and credit. But the authors pass too lightly the questions of money, the civil works program, and especially the program of regional planning embodied in the Tennessee Valley Authority; simply confining themselves to the statement that they regard relief activities as a matter of right, as a rational action to abolish poverty and suffering, as "one of the greatest advances in practical humanity the world has ever seen." In summary, the New Deal legislation is a break with our historic past, foreshadowing a future collectivism in character. In saying this, the authors appear to accept the keynote of "coöperation" too uncritically, as a sufficient formula to conjure away class antagonisms and competition between nations. These doubts cannot be blithely brushed aside by a mere inquiry concerning the interests to which President Roosevelt will appeal for support in case of a serious opposition to his policies at the next election.

EUGENE M. KAYDEN

BOND, B. W., JR. *The civilization of the old northwest: a study of political, social and economic development, 1788-1812.* (New York: Macmillan. 1934. Pp. ix, 543. $3.50.)

Several chapters are devoted to the distribution of the land, pioneer agriculture, opening up communication, and the rise of trade and industry.

CARMAN, H. J. *Social and economic history of the United States.* Vol. II. *The rise of industrialism, 1820-1875.* (Boston: Heath. 1934. Pp. x, 684. $4.)

This is the second volume of what appears to the reviewer to be the most satisfactory social and economic history of the United States yet attempted. The treatment is topical with what consideration for chronology such treatment allows; but beyond this there is a serious attempt to interpret the remarkable changes which came over the country, as the Industrial Revolution advancing carried us in the Civil War and the triumph of acquisitive capitalism in the post-war decade.

The author does not put the matter quite so baldly and he might not agree to so extreme an interpretation. The topical treatment and the attempt to cover nearly everything of significance does in fact conceal the pattern. A more interesting and perhaps a more valuable book might be made by elimination and re-ordering of material, but it would not fulfill what seem to be the requirements of academicians and their texts.

Some chapters hold together much better than others. The first, the rise of the factory system, is excellent except where it ties up the beginnings of the labor movement with the factory worker. It seems impossible to correct the error that the labor movement grew out of the Industrial Revolution. It did not. Labor movements everywhere began with the skilled craftsmen in the towns and their reforming sympathizers. The factory workers were the last and are still the last of the industrial workers to participate.

The westward movement described in Chapter 3 is among the best integrated in the book while Chapter 5 is a potpourri of miscellaneous culture items. The three chapters dealing with the Civil War and its social and economic backgrounds are exceptionally good and prove the claim of the economic historian to his place in the sun. Here as elsewhere the author has quoted source material to advantage. Finally, "Triumphant industrialism"—why are we so shy of the more accurate term "capitalism"? —is a true picture of acquisitiveness gone mad, bad and rushing to destruction in the panic of 1873.

Norman J. Ware

Copland, D. *Australia in the world crisis, 1929-1933.* (New York: Macmillan. 1934. Pp. xii, 209. $2.50.)

Dodd, A. H. *The Industrial Revolution in North Wales.* (New York and London: Oxford Univ. Press. 1933. Pp. xxxi, 439. $3.75.)

This careful regional study is primarily devoted to the period extending from 1760 to 1840. North Wales was a backward rural district until the second half of the eighteenth century. The development of resources in coal, iron, and copper led to rapid industrialization in Flintshire. Slate quarries were opened on a large scale in Caernarvon, and the cottage industries of Montgomery and Merioneth were reorganized under the factory system. The stimulus of the war encouraged enclosure on a large scale between 1790 and 1815. The economic organization of the region was thus completely transformed. These developments were associated with the building of turnpikes and canals. The development of the railroad reacted adversely upon North Wales, as it increased the competitive advantages of the primary mineral districts of England. Some of the Welsh deposits, too, had been practically exhausted even in the relatively short period of intensive exploitation. In consequence, the mineral industries of Flintshire declined after 1840, and the textile industry moved from the small water powers of Wales to the great coal fields of England.

Professor Dodd's study covers a singularly definite episode in the general history of the period; and, although it may seem to possess little interest for the general reader, these changes in Wales are of the greatest significance for any analysis of the broader problems of the localization of industry.

A. P. U.

Einzig, P. *Germany's default: the economics of Hitlerism.* (New York: Macmillan. 1934. Pp. x, 128. $3.)

Fay, C. R. *The Corn laws and social England.* (New York: Macmillan. 1932. Pp. x, 223. $2.80.)

Up to page 78, this little book is an interesting summary of the early bounties on grain and the trade in it. Considerable space is devoted to the warm defense of Adam Smith against those inclined to qualify some of his

statements, notably Donald G. Barnes and E. Lipson. Since the appendix begins on page 156, there are 77 pages of text on the period from 1815 to the repeal, including a fairly long chapter on social thought. Obviously the work cannot be, nor does it pretend to be, either a history of the Corn laws or a thorough analysis of their imprint upon English life and economic ideas. As a commentary upon the newest scheme of the British protectionists for "taxing food at the consumer's expense and in the same breath denying that they tax it at all," the book is a sort of oversized tract which would be more effective if it were shorter, less sarcastic in tone, and less given to ponderous digressions from the main argument.

M. M. Knight

Foster, W. *England's quest of eastern trade.* (New York: Macmillan. 1934. Pp. xiv, 355. $4.)

Greenfield, K. R. *Economics and liberalism in the Risorgimento: a study of nationalism in Lombardy, 1814-1848.* (Baltimore: Johns Hopkins Press. 1934. Pp. 365. $3.)

Hart, A. B. and Schuyler, W. M., editors. *The American year book.* 1933 ed. (New York: N. Y. Times Co. 1934. Pp. 900. $7.50.)

Hawk, E. Q. *Economic history of the South.* (New York: Prentice-Hall. 1934. Pp. xvii, 557. $5.)

The South has been a definite conception in the mind of Americans since colonial times, for it has had a development much apart from the rest of the country. This fact has led to many studies of the region, but the volume under review is the first to attempt to combine into a whole its economic history from the beginning down to the present. Professor Hawk, though using original documents to some extent, has made much use of the many excellent secondary works dealing with the subject; for his purpose was to write a textbook which perforce should be more factual than interpretative. In 17 chapters he has woven together the economic factors in the South's history, the land and the people, agriculture, industry, transportation, and finance; and he has dealt with these subjects not only by periods but also where possible, state by state.

Though his ingredients are well selected for a pioneer work, his omissions or lack of emphasis might be mentioned in a few instances. He has failed to give to the colonial fur trade and cattle business the importance they had; in his discussion of the rise of the sugar industry in ante-bellum times he did not seem to realize that considerable amounts of sugar were grown in states east of the Mississippi; and in his treatment of the Civil War times, he has given little attention to the blockade-running activities and has scarcely mentioned the great amount of trade that went across the land frontiers. The ante-bellum period receives much more space than any other, almost twice as much as the period following the Civil War and Reconstruction, which fact should be somewhat surprising in the light of the industrial progress that has come during the latter period.

His treatment is clear and his organization logical, though the last 100 pages of the book might be easily improved upon. As a synthetic factual study it is a distinct contribution; and as a textbook it will fill a genuine need, though it would have been more successful for this purpose had it carried more maps and diagrams.

E. M. Coulter

HUMBERT, R. L., editor. *Virginia: economic and civic.* (Richmond: Whittet and Shepperson. 1933. Pp. 427. $4.)

The attempt of the scholar and the business publicity agent to collaborate generally proves disappointing to participants and to the reader. The scholar may not use his critical faculty, and the advertising man is inhibited in the exercise of his skill. The result is a denatured exposition, neither truly informing nor swiftly captivating. Hybrids are sterile.

The present work is no exception to the rule. It was "prepared in the Virginia Polytechnic Institute in collaboration with the Virginia State Chamber of Commerce." Several chapters are devoted to description of physical resources, and form a good enough catalogue. But others, dealing, for example, with labor and with state and local government, tell the truth but not the whole truth. Is Virginia county government efficient? In what directions does it need reform? What is the status of labor in Virginia?

BROADUS MITCHELL

HUNTINGTON, E., and CUSHING, S. W. *Principles of human geography.* 4th ed., rewritten. (New York: Wiley. 1934. Pp. xxii, 467. $3.)

INNIS, H. A. *Problems of staple production in Canada.* (Toronto: Ryerson Press. 1933. Pp. xi, 124. $2.50.)

The core of this book is the 52-page discussion of government ownership in Canada. Around this nucleus the author has brought together some seven or eight of his articles on different subjects from different periodicals. A better title for the book would be, *Economic and Political Problems of Canada.* Frankly the book lacks unity; and in my opinion too much is made of the geographical factors. Once this part of the book is behind the reader, he will then find the remaining 100 pages fresh and enlightening. The subject of transportation in Canada is treated with great competence. Here is told in a brief but comprehensive manner the history of Canada's two great railway systems, the Canadian Pacific and the Canadian National.

American economists will find this book worth while, if not indispensable, for its extremely fair and thorough discussion of Canada's experiments in government ownership—namely, the three federal railways (Intercolonial, Prince Edward Island, Canadian National); the two provincial railways (Temiskaming and Northern Ontario, Pacific Great Eastern); the provincial telephones (Manitoba, Saskatchewan, Alberta); hydro-electric power (Ontario).

For good measure the author gives us a chapter on "Problems" (the Canadian North, rural-industrial communities for Western Canada, staples and the depression); and a final chapter on "Solutions." This chapter is devoted to the Imperial Economic Conference at Ottawa in 1932. As to whether this conference has opened the door to a better future or has merely taken one more step towards "hardening of the arteries for the Empire," the author does not make any Messianic prophecies.

JAMES E. BOYLE

KNOOP, D. and JONES, G. P. *The mediaeval mason: an economic history of English stone building in the later Middle Ages and early modern times.* (Manchester: Manchester Univ. Press. 1933. Pp. xii, 294. 12s. 6d.)

Probably the three chief industries in the Middle Ages were agriculture, building, and cloth manufacture. The present scholarly book deals with

building, but especially with stone building. Since building in the early part of the mediaeval period was chiefly of wood, this book is necessarily concerned with the later Middle Ages.

We are surprised to learn how many different kinds of masons there were —a dozen or more. Perhaps we need not assume, however, that all the members of these different classes were out-and-out specialists. The "free-masons," whom we now associate with the Masonic Order, were in some cases simply workers in freestone, but they may also have been so called because free of a gild or free from a gild, or free (skilled) workers as distinct from villain or peasant masons.

The book also deals with the gilds and wages of masons, and more significantly with the organization and administration of building in the later Middle Ages. While in a highly organized instance of building, there might be a master of the works, a building contractor, a master mason, and an architect, there was, however, typically one person in charge of construction or one part of it. This was the master mason. As the authors say, there were two stages, or types: one in which the master mason, with his journeymen, apprentices, and laborers, was simply hired at a wage to do a piece of work; the other stage saw the master mason act as a contractor, receiving not wages but profits.

The authors have used chiefly original sources which are presented to the reader in an intimate fashion. Appendices provide statistical material and transcripts of documents. Since much of the building was royal and ecclesiastical, we naturally find that the sources are largely government and Church records.

N. S. B. Gras

Kohn, H. *Orient and Occident.* (New York: Day. 1934. Pp. vii, 140. $1.75.)

The relations of Orient and Occident are set forth under chapter headings dealing with political, cultural, social and economic problems, with a final chapter on "New prospects in world politics."

Lane, F. C. *Venetian ships and shipbuilders of the Renaissance.* (Baltimore: Johns Hopkins Press. 1934. Pp. ix, 285. $3.50.)

Lengyel, E. *The new deal in Europe.* (New York: Funk and Wagnalls. 1934. Pp. vi, 312. $2.)

Lipson, E. *The economic history of England.* Vols. II and III. *The age of mercantilism.* 2nd ed., rev. (London: Black. 30s., two vols.)

Lynskey, E. M. and Asia Committee. *Manchuria: the problem in the Far East.* Pamph. no. 12. (Washington: Catholic Assoc. for Internat. Peace. 1934. Pp. 69. 10c.)

McConaughy, J. *Who rules America? A century of invisible government.* (New York: Longmans Green. 1934. Pp. 338. $3.)

Narrative history of the United States, beginning with Washington's administration and ending with the nineteenth century, directing attention to the more sordid and selfish activities of men prominent in public affairs. Politicians and business leaders suffer alike in the interpretations the author places upon their motives.

Morley, F., editor. *The economic world today.* (Chicago: Univ. of Chicago Press. 1933. Pp. x, 396.)

Murdock, G. P. *Our primitive contemporaries.* (New York: Macmillan. 1934. Pp. xii, 614. $3.60.)

PAGE, F. M. *The estates of Crowland Abbey: a study in manorial organisation.* Cambridge stud. in econ. hist. (New York: Macmillan. 1934. Pp. xiv, 462. $7.50.)

SCHLIER, O. *Aufbau der europäischen Industrie nach dem Kriege: zum wirtschaftlichen Schicksal Europas.* Teil I. (Berlin: Junker und Dünnhaupt. 1932. Pp. vi, 56.)

This compact little pamphlet is the first publication of a series designed to present in summary form the significant economic facts on the industrial, commercial, agricultural, and organizational panorama of Europe, with particular reference to the degree of existing and potential interdependence and integration amongst the several national systems. This series is to be paralleled by three other series, dealing respectively with (1) the effects of national economic policies upon the underlying economic structures of the several states, (2) the impact of world industrial and agricultural production shifts which have worked to the disadvantage of Europe, and (3) the bearing of the more important changes in the capital investment and financial markets upon the problems posed for solution by the drift of events.

The worth of this initial pamphlet must rest largely upon the subsequent publications, since it is clearly intended to serve as a ground-mapping sketch for what is to follow. The descriptive sketch is designed to lay out in broad lines the facts regarding industrial location, plant location determinants, and trends in the regional shifting of industries as affected by nationalistic economic policies, and changes in technology and other factors. For these purposes a double classification is carried through. In addition to the conventional census division of industries into raw materials and semi-manufactured, producers', and consumers' goods branches, these are re-classified in terms of the decisive factor determining location accordingly as industry is oriented by material, labor, or consumption (area). For comparative purposes, Europe is again divided into the principal industrial districts (England and north central Europe) and the peripheral areas dominated by agriculture and handicraft; and the factors determining location are divided into strictly economic (and technological) and non-economic (largely nationalistic).

Unfortunately but very little was done along the last-mentioned line, except so far as the comparisons were carried out as though the non-economic factors did not, for the moment, exist. There is a certain justification for this omission in the fact that while the statistics are confessedly faulty when applied to the other line of division, they are practically useless in the latter connection, and in the stated intention to go more fully into this matter in subsequent publications.

As a first approximation and a preliminary sketch, this pamphlet deserves high commendation, not only for its clarity, compactness, and comprehensiveness, but also for its forceful demonstration of the fundamental economic unity of the European continent, and the patent absurdity of its present division into more or less self-contained and economically water-tight compartments.

ROBERT A. BRADY

STALIN, J., and others. *From the first to the second Five Year Plan: a symposium.* (New York: Internat. Pubs. 1933. Pp. 490. $1.50.)

Tannenbaum, F. *Peace by revolution: an interpretation of Mexico.* (New York: Columbia Univ. Press. 1933. Pp. 317. $3.50.)

A contribution to the history of the more recent Mexican revolution beginning in 1910. Especially valuable for its analysis of the labor and agricultural problems. The author has spent several years in Mexico.

Tannenbaum, F. *Whither Latin America?* (New York: Crowell. 1934. Pp. xix, 185. $2.)

Touzet, A. *L'économie indochinoise et la grande crise universelle.* (Paris: Giard. 1934. Pp. xvii, 426. 30fr.)

André Touzet, former Colonial Governor of Indo-China, offers an interesting and complete picture of the economic conditions of that country during the world-wide depression. In order to make his discussion more valuable, he constantly compares conditions and methods of improvement with those of other countries.

Like the whole world, Indo-China was hard hit in the years 1929-33. The value of rice exports, for instance, by far here the most important contribution to world trade, was in 1933 less than one-fifth what it was in 1926, the result of the effort of her customers to reduce importation to a minimum in order to balance trade. The rubber export, although in amount increasing 50 per cent since 1926, declined in that same period in value to one-tenth of the peak obtained in that year. As both rice and rubber are products of the south (Cambodga and Cochin-China), this ruined completely the former prosperity of that section. The north (Tonkin) is less involved because her main export, coal, declined only 40 per cent in that same period. Total trade figures for Indo-China show a decrease in value of 63.5 per cent which is almost normal if compared with the other colonial countries.

The policy of protection giving strong advantages to France and the other French colonies increased the share of those countries in the trade of Indo-China especially in regard to imports (increased from 45 per cent to 60 per cent since 1928), but brought serious complaints from other countries, notably from China and Japan. As a result, special treaties were signed with both, giving those countries certain trade advantages in order to protect their marketing of products in Indo-China.

The greater part of the book discusses methods to survive the depression and at the same time to build for the future. Of special interest is the effort to continue the construction of new irrigation projects involving about 500,000 hectares of arable land, the construction of new railroads and motor roads, as well as the amelioration of navigable rivers and maritime ports. The most important of all those projects is the planned completion of the missing link in the railroad between Saigon and Hanoi, the southern and northern capitals. This link, if completed by 1937, will offer a direct connection of a length of 1,200 miles between these two cities.

In 1930 the local monetary unit, the piastre, was stabilized on a gold basis (one piastre about 1,000 French francs); many still claim the necessity of inflation in order to be able to compete with countries with inflated values.

Direct financial help has been given to distressed agricultural industries, notably to rubber plantations; credits advanced to them in the four-year period 1930-33 amounted to 9,000,000 piastres to which should be added the premium of rubber import in France amounting to another 8,000,000 piastres.

Finally, the book discusses the possibility of a strong government control on the marketing of rice, a kind of rice pool comparable to the wheat pool in Canada and the former Federal Farm Board of the United States.

Summarizing the book, it may be said to be of real value not only for the study of economic conditions in China, but also as an example of the influence of the depression on tropical countries and the methods to be taken as defense against it.

S. Van Valkenburg

Van der Mandele, K. E. *Het liberalisme in Nederland: schets van de ontwikkeling in de negentiende eeuw.* (Arnhem: Van Loghum Slaterus. 1933. Pp. vii, 237.)

Van der Poel, J. *Railway and customs policies in South Africa, 1885-1910.* Royal Empire Soc. imperial stud. no. 8. (New York: Longmans Green. 1934. Pp. 145. $3.)

Wheeler-Bennet, J. W. and Heald, S., editors. *Documents on international affairs, 1932.* (New York: Oxford Univ. Press. Issued under the auspices of the Royal Institute of International Affairs. 1933. Pp. xiii, 437. $6.50.)

The first 150 pages are concerned with reparations and war debts, including those to the United States. The remainder of the volume deals with disarmament and the Sino-Japanese dispute.

*The handbook of the Soviet Union.* (New York: Day. $2.)

*India: statement exhibiting the moral and material progress and condition of India during the year 1931-32.* 67th no. (London: H. M. Stationery Office. 1933. Pp. xii, 238. 2s. 6d.)

*Japan: the thirty-third financial and economic annual.* (Tokyo: Govt. Printing Office. 1933. Pp. vii, 275. Yen 2.)

*Kindom of Roumania.* Bull. no. 66 (spec. bull. on securities in default). (New York: Inst. of Internat. Finance. 1934. Pp. 15.)

*Statistical abstract of the United States, 1933.* 55th no. (Washington: Supt. Docs. 1933. Pp. xvi, 786. $1.35.)

*Tres sugestiones para aliviar la crisis.* Estudio de problemas nacionales no. 37. (Buenos Aires: Confed. Argentina del Comercio, de la Industria y de la Producción. 1933. Pp. 18.)

The first part of this study is devoted to a criticism of the government's efforts to restore prosperity by the establishment of minimum wages and hours of work for Argentine workers. The results of these efforts, the authors contend, would be an increased burden of cost amounting to $460,627,200 which would have to be paid by consumers in higher prices or would bring about the bankruptcy of numerous firms operating without profit or at a loss. Either of these effects would increase business inactivity and unemployment.

Concerning the government's policy of public expenditure for public works as a means of stimulating business recovery, the authors contend that the increased taxation operating to increase the cost of production would force many firms to suspend operations or would reduce consumer purchasing power, and in either case would bring increased unemployment. Absorption of the unemployed in government work would operate to reduce the national income and impoverish the nation.

The authors in the second and third parts of this study suggest the adoption of two specific means for the restoration of economic equilibrium: the reduction of interest rates on federal and local government obligations,

internal and external, and on long-term private loans; and the reduction of the value of the peso. They estimate that reduction of interest rates here proposed would effect a saving of $124,000,000 for the federal and local governments.

The reduction of the value of the peso would operate to raise the prices of farm produce sold in a world market without proportionately increasing the domestic price level, and in this manner would contribute to permanent economic recovery.

John G. Eldridge

## Agriculture, Mining, Forestry, and Fisheries

### NEW BOOKS

Ainsworth, R. M. *Profitable grain trading*. Ed. of 1934. (Madison City, Ill.: Ainsworth's Finan. Serv. 1933. Pp. 252.)

Astor, W. A. and Murray, K. A. H. *The planning of agriculture*. (London: Oxford Univ. Press. 1933. Pp. 186.)

Aylesworth, P. F. *Changes in farm income in central Michigan*. Bull. no. 2. (East Lansing: Mich. Agric. Expt. Sta. 1933. Pp. 69-73.)

Baldwin, R. W. *Price differentials in wheat futures between Kansas City and Chicago*. Stud. in bus. admin., vol. iv, no. 2. (Chicago: Univ. of Chicago Press. 1934. Pp. ix, 46. 75c.)

Treats of economic aspects of spreading; relationship of the spread to shipping cost; and the effect of demand and supply upon the spreads.

Bartlett, R. W. *Prices and consumption of milk in specific cities, as related to industrial payrolls and other economic factors*. Bull. 397. (Urbana: Univ. of Illinois Agric. Expt. Sta. 1934. Pp. 81.)

Black, J. D., editor. *Research in farm real estate values: scope and method*. Bull. no. 19. (New York: Soc. Sci. Res. Council. 1933. Pp. 78. 60c.)

Buchwald, N. and Bishop, R. *From peasant to collective farmer*. (London: Lawrence. 1933. Pp. 101.)

Clark, J. A. and Quisenberry, K. S. *Distribution of the varieties and classes of wheat in the United States in 1929*. U. S. Dept. of Agric. circ. no. 283. (Washington: Supt. Docs. 1933. Pp. 75. 10c.)

Clay, C. M. *The mainstay of American individualism: a survey of the farm question*. (New York: Macmillan. 1934. Pp. xiii, 269. $2.50.)

Coni, E. A. *El proceso economico de un pedazo de pan*. Estudio de problemas nacionales no. 38. (Buenos Aires: Confed. Argentina del Comercio, de la Industria y de la Producción. 1933. Pp. 34.)

This study is concerned with the movement of wheat from the point of origin on Argentine farms through the various channels of trade to the ultimate consumers of wheat products in foreign countries, and with the various manufacturing and merchandizing processes connected with its preparation for final consumption. The financial transactions and flow of money payments arising from these processes are also described and analyzed.

The study is intended for the enlightenment of those having no training in economics, and especially for government officials and legislators whose ignorance of economic law and of the complexity and interdependence of economic processes so often results in the enactment of legislation

and in the formulation and execution of governmental policies prejudicial to the common welfare. This purpose is achieved by an exposition of the more elementary economic principles and by analyzing the different economic functions performed by each of the agents engaged in the production of a piece of bread. The purchase of a loaf of bread by the London housewife sets in motion a train of complicated economic processes, each acting and being acted upon by the other. These processes encompass international trade, large-scale production and distribution, finance, wage payments, taxes, transportation charges, interest and profits. The price paid by the consumer is broken into many parts and distributed by many different payments to those directly or indirectly participating in the production of bread. The principal agents through which these payments are made are the baker, miller, broker, importer, exporter, transportation companies, and the farmer.

Attention is directed to a consideration of the differentials in the price of wheat at the Argentine export and British import ports. This differential is $1.30 per quintal; of this $1.00 is for marine transportation and $.30 for the exporter's gross profit. From the gross profit of the exporter must come interest, insurance, taxes, and net profit if any. Mention is made of the instability of ocean freights and the rigidity of inland transportation rates and how these charges taken from the greatly decreased price of wheat affect the net return to the farmer. In August, 1924, the ocean freight charge absorbed 10 per cent of the Liverpool price of $16.53 per 100 kilos, whereas, in June, 1933, the ocean freight amounted to 14 per cent of the Liverpool price of $6.85 per 100 kilos of Rosa Fé wheat. Railroad rates have remained unchanged since 1922. At that time inland transport charges for a haul of an average distance of 250 kilometers absorbed 8.75 per cent of the Argentine port price; now these charges absorb 17.5 per cent of that price. The return to the farmer is such that he is unable to meet the cost of production.

As for a remedy for this condition the author is of the opinion that little can be expected from farmer coöperatives. They have been less efficient than the commercial firms engaged in the processing and distribution of wheat and wheat products. Their costs are higher and the prices they are able to pay to the farmer are lower. They have been able to survive only because of tax exemption. The agitation for the elimination of middlemen, in the opinion of the author, is a mistake, since their functions cannot be eliminated and are being performed at the lowest cost attainable. The profit of these middlemen is only 1 per cent on turnover and effects an insignificant reduction in the price paid the farmer. If the farmer will have relief, he must seek it in reduced planting and especially in lower taxes, interest, and in opposition to social legislation that increases wages and shortens hours of work. Such costs are in part paid by the consumer in higher prices; but, since wheat is sold in a world market, the greater portion is shifted to the farmer in lower prices for his produce.

John G. Eldridge

Davis, J. S. *The A.A.A.* Day and hour ser. no. 7. (Minneapolis: Univ. of Minnesota Press. 1934. Pp. 29. 25c.)

A description of the workings of the act during the first seven months of its operation.

DOWELL, A. A. and JESNESS, O. B. *The American farmer and the export market.* (Minneapolis: Univ. of Minnesota Press. 1934. Pp. 269. $2.)

EZEKIEL, M. and BEAN, L. H. *Economic bases for the Agricultural Adjustment act.* (Washington: Supt. Docs. 1933. Pp. 67.)

FEDERZONI, L., editor. *I problemi attuali dell'agricoltura italiana.* (Bologna: Zanichelli. 1933. Pp. 416.)

FONG, H. D. *Grain trade and milling in Tientsin.* Industry ser. bull. no. 6. (Tientsin: Nankai Institute of Econ. 1934. Pp. 367-631. $2.)

GEE, W. *American farm policy.* (New York: Norton. 1934. Pp. ix, 146. $1.50.)

GEE, W. and TERRY, E. A. *The cotton coöperatives in the Southeast.* (New York: Appleton-Century. 1933. Pp. xiii, 271. $3.25.)

Economic distress has a hopeful habit of producing organizations to overcome itself; here is a careful study of one set of remedial institutions which emerged in the cotton-growing South in the unsteady post-war years.

The authors took as samples the coöperative marketing associations of North Carolina, South Carolina, Georgia and Alabama. They traced these associations and the general movement from the beginning in 1921 through the stages of a promise of monopoly price with a heavy sign-up; disappointment; legal persecution by the exchanges of their balking but contract-bound members; competition from the older channels of cotton selling; organizational federations and shake-ups; and increasing dependence on federal credit, to their present state. As the coöperatives are now in the four sample states, 10 to 15 per cent of each year's cotton crop is marketed through the exchanges, mostly by larger (but not the largest) growers, and with marketing gains which are irregular and controversial.

The account is not scrappy; it has plan, good language, and a feeling of life in it. The description of the primitive marketing system called "hog 'round selling' " ought to become a classic lecture-illustration of an imperfect market. Certainly the new exchanges, though they do no more than "possess potentially the ability to serve the cotton growers of this region with increasing effectiveness" are for their users an improvement. The failure to live up to early hopes is accounted for partly by a failure to win local support; as democracies the exchanges have been hollow. The real problem must lie in reorganization of the units of production, not of marketing. On both questions light would have been thrown by more analysis of the size and kind of holdings and the race of exchange patrons. As regards federal finance, there is the substance for an estimate that the Federal Farm Board put 100 million dollars into its effort to rescue cotton prices. Appendices give typical contracts between farmers and associations, and a table of the exchanges' operating costs per bale.

GEORGE SINCLAIR MITCHELL

HARRISON, M. and BERCAW, L. O., compilers. *The dairy industry in the United States, 1932 and 1933: a selected list of references.* (Washington: Supt. Docs. 1933. Pp. 23.)

HINMAN, E. H. and RANKIN, J. O. *Farm mortgage history of eleven southeastern Nebraska townships, 1870-1932.* Res. bull. 67. (Lincoln: Nebraska Agric. Expt. Sta. 1933. Pp. 67.)

HITZ, V. E., compiler. *Business and agriculture, 1920-1933: a partial bibliog-*

*raphy of material on the interdependence of business and agriculture.* (Washington: Supt. Docs. 1933. Pp. 155.)

Lacy, M. G., compiler. *Agricultural economics: a selected list of references.* Agric. econ. bibliog. no. 1, rev., 1934. (Washington: Supt. Docs. 1934. Pp. 20.)

Mumford, H. W. *A year's progress in solving farm problems of Illinois, 1932-33.* Compiled by F. J. Keilholz. (Urbana: Univ. of Illinois. 1933. Pp. 295.)

Nemirovsky, L. *Estructura económica y orientación política de la agricultura en la República Argentina.* (Buenos Aires: Menendez. 1933. Pp. 241.)

Robertson, C. J. *World sugar production and consumption: an economic-geographical survey.* (London: Bale and Danielsson. 1934. Pp. vi, 142. 5s.)

Sitterley, J. H. *Short-term credit used by 131 Ohio farmers.* Bull. 67. (Columbus: Ohio State Univ. Agric. Expt. Sta. 1933. Pp. 7.)

Smith, P. S. *Mineral industry of Alaska in 1932.* U. S. Dept. of Int., geol. surv. bull. 857-A. (Washington: Supt. Docs. 1934. Pp. 91. 10c.)

Stauber, B. R. *The farm real estate situation, 1932-33.* U. S. Dept. of Agric. circ. no. 309. (Washington: Supt. Docs. 1933. Pp. 67. 10c.)

*Corn futures, volume of trading, open commitments, and prices from January 2, 1930, to December 31, 1932.* Agric. Dept. stat. bull. no. 43. (Washington: Supt. Docs. 1933. Pp. 99. 10c.)

*Distribution of the varieties and classes of wheat in the United States in 1929.* Agric. circ. 283. (Washington: Supt. Docs. 1933. Pp. 76. 10c.)

*Farm Credit Administration: first annual report, 1933.* (Washington: Supt. Docs. 1934. Pp. vi, 177. 15c.)

*Fifteenth census of the United States, 1930: agriculture.* Vol. IV. *General report, statistics by subjects.* (Washington: Supt. Docs. 1932. Pp. 999. $2.50.)

*Handbook of dairy statistics.* (Washington: Supt. Docs. 1933. Pp. 129. 10c.)

*The Jewish Agricultural Society, Inc.: annual report.* (New York: Jewish Agric. Soc. 1933. Pp. 33.)

*The mineral industry of the British Empire and foreign countries: statistical summary, 1930-32.* (London: H. M. Stationery Office. Pp. 429. 6s. 6d.)

*New Zealand: statistical report on the agricultural and pastoral production of the Dominion of New Zealand for the season 1932-33.* (Wellington: Census and Statistics Office. 1933. Pp. viii, 36. 2s.6d.)

*The rural exodus in Germany.* Stud. on movements of agric. population, 1. (Geneva: Internat. Labour Office and Internat. Inst. of Agric. 1933. Pp. 137. 75c.)

*The story of beet sugar from the seed to the sack.* (Bay City, Mich.: Farmers and Manuf. Beet Sugar Assoc. 1933. Pp. 14.)

*Wheat studies.* Vol. x, no. 4. *World wheat survey and outlook, January, 1934.* No. 5. *Price relations between May and new-crop wheat futures at Chicago since 1885.* No. 6. *Environment, heredity, and wheat quality.* (Stanford Univ., Calif.: Food Research Inst. 1934. Pp. 143-182; 183-228; 229-249. 50c.; $1; 50c.)

## Manufacturing Industries

### NEW BOOKS

*National Fertilizer Association: proceedings of the ninth annual convention, held at White Sulphur Springs, West Virginia, June 19, 20 and 21, 1933.* (Washington: Nat. Fertilizer Assoc. 1933.)

*Statistisches Jahrbuch für die Eisen und Stahlindustrie, 1933.* (Dusseldorf: Stahleisen. 1933. Pp. ix, 224. RM.5.)

## Transportation and Communication

### NEW BOOKS

BRITTON, R. F. *Chiseling the motorist's road dollar.* Address before annual convention of Assoc. Gen. Contractors of America, Inc., Washington, D.C., Jan. 30, 1934. (Washington: Nat. Highway Users Conf. 1934. Pp. 15.)

CHAPMAN, J. W. *Railroad mergers.* (New York: Simmons-Boardman. 1934. Pp. xii, 157. $3.)

EVERETT, S., and others. *Our government's relation to industry and the railroads.* Nat. crisis ser. (New York: Teachers Coll., Columbia Univ. 1933. Pp. 29. 15c.)

PARMELEE, J. H. *A review of railway operations in 1933.* Reprinted from *Railway Age* for Jan. 27, 1934, fig. rev. to March 1, 1934. (Washington: Bur. of Railway Econ. 1934. Pp. 32.)

WILSON, A. T. *The Suez Canal: its past, present and future.* (New York: Oxford. 1934. Pp. 235. $6.)

*An economic survey of motor vehicle transportation in the United States.* Spec. ser. no. 60. (Washington: Bur. of Railway Econ. 1933. Pp. xiv, 219.)

Timely because of impending national legislation upon the subject and fortified, as it is, with some 60 tables in the text and 21 tables in the appendix, as well as an available supplement of 20 mimeographed pages of sources consulted, this survey is an acceptable contribution. Material covered includes a general survey of the various agencies of transport and chapters on the development, growth, taxation, and accidents of motor vehicles, together with a discussion of highway costs, social and economic costs, and effects of the growth of the commercial motor carriers. Considerable attention is given to the highways with chapters on their development, financing, disbursements and expenditures, allocation of costs, and city streets.

The study shows that passenger traffic is falling off, that there is a decline in the rate of increase of freight traffic, that there is a renaissance of inland water transportation, that pipe-line traffic and mileage is growing, and that there is a gradually accelerating rate of increase in recent years in motor and air traffic. From these facts it is contended that there is a new phase in the economics of transportation in the United States, calling for a reconsideration of the transportation policy in the light of these new conditions. Arrival at the general conclusion is achieved by study of the motor vehicle, highway development, highway financing, motor vehicle taxation, street safety, competition, and existing regulation. The conclusion is that the problem of motor vehicle transportation affects the future economic welfare of the United States and that fundamental questions as to national, state, and local policies cannot go long unanswered.

With the general conclusion there can be little disagreement; with the methods of procedure in arriving at conclusions in the several chapters, there might be some questions raised. But, if so, the latter fact really only reinforces the general conclusion. Realizing, perhaps, because of the affiliation of the Bureau of Railway Economics with the combined railroad interests of the country, that the document would be subject to careful inspection, the authors have been careful to use governmental or other equally authoritative data. Likewise, there are numerous instances of frank recognition of counter-arguments and a commendable restraint in conclusions where facts are lacking. If, on the other hand, because of the Bureau's alleged prejudice, exception be taken to the arguments or conclusions of the various chapters, it still must be admitted that the authors are entitled to a fair hearing and that they have presented their arguments most effectively.

LESLIE A. BRYAN

*Government ownership of railways: a list of publications, 1930-1934.* (Washington: Library Bur. of Railway Econ. 1934. Pp. 20.)

*Interstate Commerce Commission: 47th annual report, December 1, 1933.* (Washington: Supt. Docs. 1933. Pp. iii, 138. 75c.)

*Statistics of railways in the United States: forty-sixth annual report for the year ended December 31, 1932, including also selected data relating to other common carriers subject to the Interstate Commerce act for the year 1932.* (Washington: Supt. Docs. 1934. Pp. S-126, 290. $1.50.)

*Transportation Conference of 1933-4: report.* (Chicago: Committee on Pub. Rel. of the Eastern Railroads. 1934. Pp. 58.)

*Where freight rates and passenger fares go: a popular statement of the income and expenditures, Class I American railroads.* (New York: Committee on Pub. Rel. of the Eastern Railroads. 1934.)

*Who shall use the highways and how?* (Washington: Am. Assoc. of State Highway Officials. 1934. Pp. 16.)

## Trade, Commerce, and Commercial Crises

*Strategic Factors in Business Cycles.* By JOHN MAURICE CLARK. (New York: Nat. Bur. of Econ. Research. 1934. Pp. xv, 238. $1.50.)

This book was written for the National Bureau of Economic Research with contributing aid from the Rockefeller Foundation, the Economic Club of Chicago, the Carnegie Corporation, and various other groups and individuals. According to the introduction, signed by the Committee on Recent Economic Changes, the book is "a special study, from the descriptive and statistical record which had been assembled, to endeavor to disclose, so far as might be possible, what factors play an active rôle in throwing the economic mechanism out of balance and what factors adapt themselves passively to the changes produced by the active factors."

According to Professor Clark's statement in explaining the nature of the study, the book is not mainly devoted to the current depression

but is a study of business cycles in general. He attempts to select among the many factors involved in business cycles a limited number which have special strategic importance, combining a theoretical analysis and an inductive study of business fluctuations. A theoretical study gives us causes that are too few and too simple, whereas an inductive study reveals so many factors at work that we are likely to come to the conclusion that everything is both cause and effect. A middle course between these two extremes is steered.

Professor Clark defines a strategic factor as follows: "A factor may be said to have a strategic importance if it has real power to control other factors, and to determine the general character of the result; and it has peculiar strategic importance if, in addition, we have power to control it."

The book is divided into six parts with an appendix added. Part 1, "Theoretical approach," explains the nature of the study and gives the framework of the theory. Part 2, "Typical cycle patterns," is a study of the behavior of the time series involved in the short (or 40 months) business cycle. Part 3, "General movements, 1922-1929," and Part 4, "Special features of the last cycle," are studies of post-war economic and industrial changes in the United States up to 1933. Parts 3 and 4 are devoted to a study of major or long-swing business cycles with particular reference to the present business depression. Part 5, "The meaning and requirements of balance," is a deductive study of the nature and characteristics of a balanced industrial system with particular reference to the factors which bring about disequilibrium in industrial society. Part 6, "The strategic factors," constitutes the conclusions of the author in reference to business-cycle problems.

After giving what he designates as a partial theory of business cycles, the author discusses the factors which he considers of controlling importance in the cyclical movements. He divides the various factors into three groups: first, the originating causes; second, business responses controlling the short cycle and the possibilities of controlling these responses; third, factors responsible for longer trends. The originating causes, he designates as random factors such as the weather, crops, wars, the origination of new wants, new goods, new processes and changes in the methods of production, as well as business disturbances in foreign countries. On the whole, he does not consider these originating causes of great strategic importance, or subject to definite control policies.

In the second group he designates several factors as being responsible for short business cycles. He concludes that most of these factors are subject to some measure of control and emphasizes especially the possibility of controlling the demand for capital goods and the supply of capital funds. The fluctuations in bank credit and changes in demand

for permanent consumption goods, he thinks, are factors which might be controllable. He considers the question of control over the distribution of the proceeds of industry, but steers clear of suggesting public control of either profits or wages. He stresses the regularization of expenditures as well as the regularization of production as being control policies.

In the third group of factors responsible for longer trends, Professor Clark designates eight factors as being of primary importance. Long trends are based on some of the originating forces in the first group, such as inventions and the development of the standard of living, and they (these long trends) are modified by the business responses in the second group. The specific factors responsible for the longer trends are: (1) Development of new productive processes; (2) Development of new goods; (3) Lack of balance between consumption and savings; (4) Changes in the distribution of the national money income; (5) Changing relations between wages and interest in terms of their influences on the relative costs of labor and capital to employers; (6) The apportionment of increased productive power between more goods and more leisure; (7) The after-effects of wars, especially the deflation of prices and the dislocation of foreign trade; (8) Psychological swings from over-pessimism to over-optimism. With a rather brief discussion of these factors the author concludes that "a considerable number of the factors concerned with the longer trends have that grade of strategic importance which arises from our power to influence their action. The problems involved are subtle and difficult, and there is no likelihood of our reaching a quick solution of all of them, and guiding the forces of economic development into a regular course of unbroken and unmarred progress. But the potentiality exists and to that extent the forces we have dealt with are of especial strategic importance."

The author concludes his study with a strong plea for the improvement in business statistics and for additional research in the study of the strategic factors in business fluctuations.

Though the reader may disagree with much of Professor Clark's analysis and with many of his conclusions, he will find the book a well written, careful study of business-cycle problems.

Arthur B. Adams

*University of Oklahoma*

*Trade Depression and the Way Out*. By R. G. Hawtrey. 2nd ed. (New York: Longmans Green. 1933. Pp. ix, 183.)

The first edition of this work appeared in 1931. The second edition is greatly enlarged with an elaboration of the discussion of over-production and other non-monetary theories of the depression. The book itself is a

defense of the monetary theory of depressions. The author states that he views the trade depression as a deficiency of demand in terms of money and believes that it can be remedied by an enlargement of demand through the expansion of credit of the central banks.

Mr. Hawtrey's interpretation of the causes of the depression runs about as follows: The depression occurred because of the shrinkage in demand for goods. The demand for goods declined because there was a compression of the national income. National income was compressed as a result of the contraction of credit by the central banks. Credit was contracted by the central banks because of the large absorption of gold by the United States and France. The depression became severe because bank credit contraction was applied in 1929 at a time when there was no inflation to be corrected (page 34). He believes, therefore, that the depression was due entirely to monetary policies.

He believes that the depression can be cured by monetary policies alone. First, he would devalue the currency unit in each country in terms of gold to secure an equilibrium between prices, wages, and debts. Second, he would bring about an expansion of bank credit in each country by having the central banks increase their open-market operations in purchasing securities and commercial paper. He believes that the gold devaluation of the currency of each country would raise prices and stimulate demand, and that expansion of bank credit would furnish the necessary increase in national money income to make effective an increased demand for goods.

Mr. Hawtrey discusses various non-monetary theories of business fluctuations including the over-production, over-investment, and technological progress theories. He does not accept any of the non-monetary theories as valid. In regard to them he says: "The real answer to all the non-monetary explanations of the depression is that they are merely particular cases of the monetary explanation. If they do not explain the shrinkage of demand they do not explain the depression. And the shrinkage of demand is simply shrinkage of the flow of money" (page 100).

Mr. Hawtrey's rejection of the various non-monetary theories of business fluctuations is based largely upon his acceptance of the assumptions of the neo-classical theorists in reference to the workings of economic forces under conditions of free competition. The following quotation is typical of his reasoning: "If the physical output of a community is increased by, say one-fourth, through improved productivity, and incomes (and therefore demand) in terms of money remain unchanged, prices will fall by one-fifth. But the fall of prices does not disturb equilibrium. Wages can remain unchanged and there will be no unemployment, except such as is incidental to the shift of demand from

one industry to another" (page 100). As a matter of fact, an increase in the physical output of one-fourth will not necessarily cause a fall in prices by one-fifth as was shown by the relationship between prices and output in the United States between 1922 and 1929. The assumed condition of free play of economic forces does not exist.

It appears to me that Mr. Hawtrey lives in a fairyland of an economic system which works perfectly. If we had such an economic system, his reasoning might be sound in reference to the non-monetary theories of business cycles. But the workings of our real economic system are clogged with restraints. In his preface Mr. Hawtrey recognizes the fact that his book gives a one-sided explanation of the depression and recovery problems. He states: "The monetary theory offers an explanation of one important class of economic disorders, and indicates the remedy for them. It does not pretend that a community perfectly free from monetary fluctuations would have no economic disorders at all."

Mr. Hawtrey believes that the depression of 1929 was no different from other depressions except in magnitude. He does not believe that the depression in any way indicates that our economic system is breaking down in its operations, or that it will be necessary to have any fundamental reforms in the system in order to cure the depression. I do not agree with his position; neither do I think that Mr. Hawtrey has submitted sufficient arguments or evidence to substantiate his contention.

The book contains an excellent discussion of the monetary problems which have confronted the world since the beginning of the World War. As a pure monetary discussion, the book has great value; but as an explanation of what has happened to our economic system and as a guide to leading the world out of the depression, in my opinion, it is open to question.

ARTHUR B. ADAMS

*University of Oklahoma*

## NEW BOOKS

AKERMAN, J. *Om det ekonomiska livets rytmik.* (Stockholm: Nordiska Bokhandeln. 1928. Pp. viii, 322.)

———. *Konjunkturteoretiska problem.* Skrifter utgivna av Fahlbeckska Stiftelsen xix. (Lund: Gleerup. 1934. Pp. 128.)

The former work (*Concerning the Rhythms of Economic Life*) is Professor Akerman's doctoral dissertation, and the latter (*Problems of Business-Cycle Theories*) is an "answer" to those economists who criticized the dissertation somewhat adversely.

In the main the author defends two significant ideas. The first: that there is no separate business cycle (*Konjunkturvåg*) of either 2, 4, 6, 8, or 15 years, but that all the ups and downs in socio-economic life are closely interdependent—from the short seasonal waves to the long-run secular movements; it is all one process with many internal changes and variations, which are intimately connected with, caused by, and affecting the well-

known changes in climate, old and new natural resources, population movements, inventions, available liquid capital for new capital constructions, etc. (much like Irving Fisher's more recent idea of many cycles within one movement). The second idea: that a business "recovery" is absolutely dependent on the amount of *saved funds* available for new construction and expansion within the capital-goods industries. Therefore, the author stoutly maintains that social-insurance activities and the American "New Deal" endeavors are contrary to sound economic policies for a quick "recovery." He advocates a quick lowering of the living-standards for the masses in order to obtain the necessary *saved funds* for a new expansion in the capital-goods industries—which, in turn, will engender automatically the necessary recovery-psychology for an expansion in the other industries. A depression is caused mainly by poor and over-investments, plants becoming obsolete, etc. (lost funds).

He admits with evident satisfaction that Professor Hansen is correct in saying that Hayek has arrived on the whole, "along different routes," at Åkerman's own conclusions. He suggests the terms *balanced* and *time* economy in place of static and dynamic economy. His hydraulic picture-graphs are beautiful and clear.

Lyder L. Unstad

Coudray, J. and Maure, L. *Eléments de commerce.* 3rd ed. (Paris: Dunod. 1933. Pp. 429.)

Gaedicke, H. and Von Eynern, G. *Die produktionswirtschaftliche Integration Europas: eine Untersuchung über die Aussenhandels-verflechtung der europäischen Länder.* Teil I. *Textband.* (Berlin: Junker und Dünnhaupt. 1933. Pp. viii, 179.)

Based on data of the Statistische Reichsamt and the Institut für Konjunkturforschung, the study treats questions of foreign trade policy for European manufacturing countries: whether a narrower economic interrelation is likely or whether interest should be inclined more to world trade.

Kepper, G. *Die Konjunkturlehren der Banking und der Currencyschule insbesondere von Tooke und Newmarch.* (Leipzig: Hans Buske. 1933. Pp. 128. RM.5.60.)

Dr. Kepper finds that although many books have been written on the banking and currency schools (Bagehot once had something to say about the number of such books in *Lombard Street,* pp. 1-4) none of those in either German or English concerns itself sufficiently with the theories of business cycles developed by Tooke and Newmarch or by Overstone. Kepper does not write, however, merely to contribute to the history of theory or method. Rather he is interested in the extent to which those who have been called the leaders of the two schools have solved or pointed to the solution of problems.

In the preface (p. 3) he states that the chief theories of these leaders have not yet been supplanted. On the contrary, we should today be much farther along had their successors paid more attention to the leaders.

The two main parts of the book are devoted to a presentation of the cycle theories of Tooke and of Overstone. In view of the high hopes which are raised in the preface, the critical remarks with which the book closes are rather disappointing. It appears from them that many of what Dr.

Kepper considers important questions of the cycle were not even considered to be questions by Tooke and Overstone (pp. 113 ff). Although the author makes an excellent defense for the leaders and indicates why the problems did not occur to them, such a defense is hardly what one is led to expect.

KARL R. BOPP

KUSCHMANN, H. *Die Untersuchungen des Berliner Instituts für Konjunkturforschung: Darstellung und Kritik.* Beiträge zur Erforschung der wirtschaftlichen Wechsellagen Aufschwung, Krise, Stockung, Heft. 7. (Jena: Fischer. 1933. Pp. xi, 172. RM.9.)

DE LEENER, G. *La politique commerciale de la Belgique.* Pub. de l'Inst. Universitaire de Hautes Etudes Internat., no. 9. (Paris: Recueil Sirey. 1934. Pp. 85.)

MACHLUP, F. *Führer durch die Krisenpolitik.* (Vienna: Springer. 1934. Pp. xv, 232. RM.7.80.)

REMER, C. F. and PALMER, W. B. *A study of Chinese boycotts, with special reference to their economic effectiveness.* (Baltimore: Johns Hopkins Press. 1933. Pp. xii, 306. $2.75.)

While the trade boycott as a means of attempted redress of wrongs in international relations is not peculiar to China, that country has long been its chief exponent and has used it more often than any other people. A detailed factual study of the effectiveness and methods of Chinese boycotts in accomplishing anticipated results becomes of special interest to students of international relations. Such a study Professor Remer has given us in this book, which for the first time examines the subject as comprehensively and exhaustively as the statistics of trade and the complicated details will allow.

The first three chapters of the book give the general characteristics of the Chinese boycott and the social and political conditions upon which it rests as a weapon of passive resistance long used in dealing with their own officers and governments, and more recently expanded to national proportions in resisting outside forces. The following 11 chapters describe in detail the nine most important organized boycotts beginning with the anti-American boycott of 1905 and ending with the "Great Boycott" of 1931 against Japan. In each case, a history of the events leading to the boycott is given, its progress and an examination of its effects upon the trade of the countries against which it was directed. The last two chapters review the boycott movement as a whole over the period following 1905 and state the author's conclusions as to their net results. Appendices give the detailed statistical tables upon which are based the statistical analyses of the effects of boycotts on trade.

Over the period of about 30 years, Chinese boycotts have become more numerous, more extensive in territory covered, more general in their appeal to various classes of Chinese, and more effective in their results. The author sets up two standards of measuring the results of boycotting. First, their economic *effectiveness* as determined by the influence on the trade of the boycotted country; secondly, their *success* as a means of bringing about the desired results in changes of policy on the part of the foreign country affected.

In the first case, the effects of boycotts on trade are difficult to isolate

from the many and complex factors affecting the flow of commodities between nations even if we had more complete statistical data than are obtainable from the Chinese figures. Doubtless the economic effectiveness of the boycotts heretofore have been exaggerated, but it seems apparent from the detailed analysis given here that they have grown in effectiveness in post-war years. That the 1931-1932 boycott against Japan, lasting over a long period, spread generally throughout the country, and based upon strong emotional appeals, inflicted real injury upon Japan's trade seems amply demonstrated. The author reaches a general conclusion that under such conditions as that of the 1931 boycott, imports into China from a boycotted country are reduced by 10 per cent in northern China and from 25 to 40 per cent in central and south China. While this may be the best obtainable estimate of the effectiveness of the 1931 boycott, it is not clear that such a generalization on the effect of boycotts is established.

As to the second standard—namely, the success of the boycott in achieving its objects—there is evidence that the method has again and again had a part in securing modifications in foreign policies. But it is an awkward method and exceedingly costly to the Chinese themselves. While the boycott or threat of boycott may have been a factor in securing a modification of Japan's policy toward China at the time of the 21 demands and in the settlement of the Shantung question and on other occasions, the net beneficial results are by no means clear, even in the sphere of modification of foreign policies. One wishes that the author had explored the effect of the boycott in stiffening rather than softening the attitude of the foreign powers in their policies in dealing with that country. Was not the boycott, for instance, an exceedingly important factor leading to the loss by China of Manchuria? Nor will all readers be convinced of the author's conclusion, that, with the renunciation of war, the boycott of the Chinese type may become a powerful international weapon.

G. B. Roorbach

Schmidt, C. T. *German business cycles, 1924-1933.* (New York: Nat. Bur. of Econ. Research. 1934. Pp. xix, 283. $2.50.)

Wallace, H. A. *America must choose.* (New York: World Peace Found. 1934. Pp. 33. 50c.)

Clear statement of the problem of choosing nationalism, internationalism, or a midway position in the development of foreign trade and domestic policies.

*Balances of payments, 1931 and 1932, including an analysis of capital movements up to September, 1933.* (Geneva: League of Nations. Boston: World Peace Found. 1933. Pp. 191. $2.)

## Accounting, Business Methods, Investments and the Exchanges

*The Economics of Marketing.* By Hugh B. Killough and Barrington Associates, Inc. (New York: Harper. 1933. Pp. xxii, 608. $3.50.)

Here is a good book, planned comprehensively to describe the practical work and problems of business executives in the distribution of goods under the system of free competition for unlimited profit. Whether it is to

prove a guide for the future or a description and explanation of the past, may be debatable. If the former it will be effective; if the latter, accurate and enlightening.

Professor Killough has for many years been a thorough student and an effective teacher of economics and marketing. His associates in authorship are a well diversified group of consultants who have operated successfully in New York City as a professional marketing research and sales engineering company. In addition to the work of these, there are two excellent examples of practical field analysis as actually done for an employing corporation. These are contributed by Mr. H. A. Keene, sales engineer, and Mr. H. E. Howell, C.P.A., who, by permission of the Grinnell Company of Providence, have released case material of the sort usually held confidential, or heavily camouflaged.

The work being an assembly, a literary critic might with justice complain of poor continuity; but to the teacher of marketing, Dr. Killough's organization of materials will prove practical; and the editing, explanatory introductions, and theoretical conclusions are all by Dr. Killough, who assumes full responsibility both for conclusions drawn and for errors committed.

Minor errors inevitably creep into any work assembled from such diverse sources, and this one is not immune to them. But they are remarkably few and unimportant. Two major errors appear: the one explicit, the other implicit in the work. The explicit error is the too clearly and too convincingly expressed emphasis of the conventional economics as basis for integration and understanding of the fact material. The book is above all a text, and as such it carries the danger that the pupil may be so convinced by the logic of its explanations as to believe the work complete and that from it he has really acquired an adequate understanding of the economics of marketing. Dr. Killough will not claim that he himself has that. It would have been better had he been more careful to emphasize the theoretical objections to, and bases of attack upon, the system which he has accepted as the basis of his integration.

The error implicit in the work is the one that has betrayed the economists as a class for a century. The economist has had the task of describing the social phenomena associated with the production and distribution of goods and wealth among men, and of reducing that description to shorthand forms for use in explanation and prediction. Having done this, he usually has passed easily to the next step—the fallacy of assuming that the system which he has described must be the only right one, since no other can be fitted into his well-rounded description. Dr. Killough has not entirely escaped this fallacy. The reader of this book derives, in part from the very excellence of its descriptions and in part also from the subtle spirit of the author's assumptions and explanations,

the impression that the processes described are good, and as they ought to be.

The processes described are the typical processes by which the existence of a demand (actual or potential) for a given product is met by the production of a supply far in excess of that demand and the simultaneous production of floods of advertising propaganda and organized sales forces for the intensification of that existing demand and the diversion of normal demand from other products to swell the market for the absorption of the excess product at profit-bearing prices. In the light of all the developments of recent years, teachers who use this excellent descriptive text may do well to challenge the validity of conventional assumptions more sharply than Professor Killough, writing prior to the winter of 1932-33, saw fit to do.

With these reservations made, nothing remains but praise for this book. It is clear description, well illustrated; an excellent exposition of the prevailing economic theory of the time of its writing; a revealing statement both of the philosophy and of the practice of the practical men who under a profit system and *laissez faire* inevitably control the economic process.

John H. Sherman

*Oak Park, Illinois*

## NEW BOOKS

Alspaugh, R. B. *Consumers' reactions to special sales in Columbus department stores.* (Columbus: Ohio State Univ. Bur. of Business Research. 1933. Pp. xi, 95. 50c.)

This report is a careful analysis of the reactions of women buyers to special sales carried on by department stores. The manuscript is based upon personal interviews with almost 2,000 women. The respondents were carefully chosen with respect to income groups and were classified according to their use or non-use of charge accounts. The questionnaire is objective and the whole technique conscientiously worked out to give the tabulations and conclusions a maximum validity.

The survey shows that, in Columbus, 81 per cent of the women, regardless of income classification, watch newspaper advertising for the announcement of special sales. Even more striking is the widespread lack of confidence in the truth of special-sale advertising and in the quality of the merchandise included in special sales. The women had little understanding as to why department stores could offer items at the attractive prices which are characteristic of such sales. It was also learned that customers prefer to have mark-downs given in terms of dollars and cents rather than in percentages or fractions and that a majority of the buyers prefer to have the old price left on the merchandise. Detailed information about customer reactions to marking up merchandise after special sales, to limited store service for sales items, to the articles most frequently purchased at sales, and to many other problems are presented. It is clearly shown that the major problems in making special sales successful include the elimination

of questionable practices, the toning down of exaggerated advertising and the offering only of merchandise with a quality comparable to that of the regular items handled by the store.

The material is organized in a clear and scientific manner in useful form. It represents one more case where facts are displacing guesswork. As regards presentation and technique, the work has been admirably done.

ALBERT HARING

ANDERSON, M. D. *Capital and interest.* (Chicago: Business Pubs. Co. 1934. Pp. vii, 202. $2.50.)

ARMSTRONG, F. E. *The book of the stock exchange: a comprehensive guide to the theory and practice of stock and share transactions and to the business of members of the London and provincial stock exchanges.* (London: Pitman. Pp. 405. 10s. 6d.)

AYRES, L. P. *The economics of recovery.* (New York: Macmillan. 1933. Pp. vi, 189. $1.75.)

Colonel Ayres lays particular stress in this tentative appraisal of the New Deal program upon the importance of a resumption of the production of capital goods. He suggests that around one-half of the unemployed come from industries which make durable goods and concludes that this fraction of the idle can only be put to work by the resumption of private industry. Public works' expenditures in the neighborhood of three billion dollars are wholly inadequate, says the author, in the light of the fact that in 1929 the value of the output of durable goods was about 40 billion dollars of which eight billion were spent for building alone.

Written in the early autumn of 1933, this book is already in one sense superseded by additional experimentation and further elaboration of the Roosevelt program, keyed as it is to an opportunist coping with a rapidly shifting economic scene. But the basic thesis of the volume would no doubt still stand as the author's considered warning. That his attention is fixed on recovery with the pre-depression concept of prosperity and that he is less concerned with "reconstruction," both of these assumptions stand out clearly. Whether an appraisal that takes this premise will be a valid one from the point of view of the Administration's objectives only time can tell. From now on political and economic factors and forces promise to become inextricably bound together.

ORDWAY TEAD

BABSON, R. W. *Washington and the Revolutionists: a characterization of recovery policies and of the people who are giving them effect.* (New York: Harper. 1934. Pp. x, 337. $2.50.)

Treats of the recovery policies of the administration, with sketches of the personalities in charge of the several policies.

BENNETT, C. *Scientific salesmanship and readings in salesmanship.* (St. Louis: Am. Efficiency Bur. 1933. Pp. xxi, 702. $3.)

The study explains the development of the new individualism in which the welfare of the individual is dependent upon the welfare of the group. This requires new selling procedure, the nature of which is determined upon the basis of a study of social psychology and dynamic economics. A new scientific theory of personal selling, called the Expansion of Meaning theory, is presented. This theory gives due consideration to the influence of

the environment upon human behavior, as being the dominant factor in determining the nature of present-day buying and selling behavior. Tendencies in consumption and distribution are also traced, and the need is shown for professional and ethical selling methods which give due recognition to the importance of the consumer.

Emphasis is placed upon the consumer's understanding of the product and the salesman's understanding of the value and use of the product to be sold to consumers. Purchase by the customer will be dependent upon his acceptance of the merits and features of the product. This selling procedure is very different from the common selling procedure in which intangible values are dramatized and perhaps falsely attributed to a product or service.

The appendix, "Readings in salesmanship," consists of 314 selected articles adapted from the writings of authorities which are directly related to the text.

HARRY J. O'NEILL

BOWMAN, R. T. *A statistical study of profits.* Res. stud. xxiii. (Philadelphia: Univ. of Pennsylvania Press. 1934. Pp. xvii, 322. $3.)

BROOKE, M. *Other people's labor and material in the building industry of greater New York: a study of the utility of the New York mechanics' lien law.* (New York: Central Book Co. 1933. Pp. 63.)

BROWN, D. V., and others. *The economics of the recovery program.* (New York: McGraw-Hill. 1934. Pp. xii, 188. $1.50.)

Seven critical essays by members of the staff in economics of Harvard University, as follows: "Depressions," by Joseph A. Schumpeter; "Purchasing power," by Edward Chamberlin; "Controlling industry," by Edward S. Mason; "Helping labor," by D. W. Brown; "Higher prices," by S. E. Harris; "Helping the farmer," by W. Leontief; and "Economics versus politics," by O. H. Taylor.

BRUNNER, E. DES. *In relief of debtors.* Nat. crisis ser. (New York: Teachers Coll., Columbia Univ. 1933. Pp. 29. 25c.)

COPELAND, M. T. *Raw material prices and business conditions.* Bus. res. stud. no. 2. (Boston: Harvard Univ. Grad. School of Bus. Admin. 1933. Pp. v, 56.)

DANIELS, M. B. *Corporation financial statements.* Michigan bus. stud. vol. vi, no. 1. (Ann Arbor: Univ. of Michigan. 1934. Pp. vii, 131. $1.)

DEARING, C., HOMAN, P. T., LORWIN, L. L. and LYON, L. S. *The ABC of the NRA.* (Washington: Brookings Inst. 1934. Pp. xiv, 185. $1.50.)

An orderly description and analysis of the National Recovery act, dealing with its background, provisions, legal and economic issues, administrative organization, president's re-employment agreement, code-making and enforcements of codes.

DEWING, A. S. *A study of corporation securities: their nature and uses in finance.* (New York: Ronald. 1934. Pp. ix, 427. $4.)

GILMAN, S. *Analyzing financial statements.* Rev. ed. (New York: Ronald. 1934. Pp. xiii, 475. $4.)

Revision of volume published in 1925. "The general structure and plan of the older book has been followed in this volume, but in content it is an entirely new work." The analysis methods are more specifically adapted to present-day problems.

GOLDSCHMIDT, R. W. *Kapitalpolitik.* Veröffentlichungen des Instituts für Finanzwesen an der Handels-Hochschule Berlin, Band 6. (Berlin: Junker und Dünnhaupt. 1933. Pp. xii, 478. RM.25.)

The volume is concerned with the general and special problems of saving and investment. Governments have influenced this process for specific purposes without particular regard to the general consequences. The particular objectives of governmental interferences have been: (1) to aid foreign policy (control over issues of foreign securities); (2) to cheapen capital for public corporations (*e.g.,* tax exemptions on public securities); (3) to aid sections of industry in their competitive struggle (*e.g.,* tariffs); (4) to help the establishment of new industries.

The instruments of governmental interference are classified under the following heads, each of which is the topic of a chapter in which numerous illustrations are given: "Control over new issues (blue sky laws, etc.)"; "Trustee (regulations of investment of funds by)"; "Restrictions (refusal to permit investment in certain forms)"; "Differential taxes"; "Subsidies"; "Taxes on interest"; "Public capital projects"; "Credit policy."

In Part 3, the writer is concerned with a development of the theory of saving and investment as well as its relation to credit policy, social policy, governmental finance, population policy, and trade policy.

KARL R. BOPP

GORDON, W. D. and LOCKWOOD, J. *Modern accounting systems.* 2nd ed. (New York: Wiley. 1933. Pp. x, 481. $4.)

This book is a revision of the work published by the same authors in 1924. With the exception of the problems, it is substantially the same as the 1924 edition. However, an entirely new set of problems has been included and, in addition, a list of questions for each of the eight major divisions of the book.

The work deals with the accounting problems of eight distinct fields: building and loan associations; insurance companies, both fire and life; banks; stock brokerage; department stores; gas companies; railroads; and municipalities. The accounting problems of each field are treated separately, with discussions of the peculiar problems involved, and typical forms and records included.

Some changes have been made in this second edition. The data contained in the chapters introductory to each division as number of companies, capital invested, etc., has been brought up to date. Some of the report forms have been revised; changes also have been made in the classification of accounts of railroad and gas companies. The discussion of brokerage accounting has been expanded to include the new activities of the Day Branch of the Stock Clearing Corporation.

F. P. SMITH

GRINSTEAD, L. H. and WISSLER, W. *Barter scrip and production units as self-help devices in times of depression.* (Columbus: Ohio State Univ. Bur. of Bus. Research. 1933. Pp. viii, 81. 50c.)

HANEY, L. H. *Business organization and combination: an analysis of the evolution and nature of business organization in the United States and a tentative solution of the corporation and trust problems.* 3rd ed. (New York: Macmillan. 1934. Pp. xxii, 685. $3.)

The first edition of this work appeared in 1913; the second in 1914. The author has now made a thorough revision, adding much new material, particularly in the chapters which deal with trade associations, holding companies, the stock market, and problems of business combination. The decisions under the Sherman act are brought down to date.

HARRISON, W. B. *The New Deal in economics.* (Wichita, Kansas: Damon Pub. Co. 1934. Pp. 20. 25c.)

HAYNES, B. R. and GRAHAM, J. *Problems in business education.* (Los Angeles: Univ. of Southern Calif. 1933. Pp. 146. $1.)

HOYT, H. *100 years of land values in Chicago.* (Chicago: Univ. of Chicago Press. 1933. Pp. xxxii, 519. $5.)

In this volume Mr. Hoyt has given to the students of land values the reasons for their fluctuations over a long period of time, a wealth of factual information and an interesting analysis of the relation of the growth of the second largest city in the country to its land values.

The graphic presentation of land values in Chicago from 1830-1933 reveals several periods of rapid rise and fall which might be called major cycles of land values or land booms, as follows: "The Canal land boom, 1830-42"; "The land boom of the railroad era, 1843-62"; "The land boom that followed a panic, a Civil War and a great fire, 1863-77"; "The land boom of the first skyscrapers and the first World's Fair, 1878-98"; "The land boom of a new era that followed a World War, 1898-1933." Each of these periods receives careful treatment.

The second part of the study analyzes the relation between the growth of Chicago and the rise of its land values. The reasons for the growth of Chicago compared with other American cities; the causes of differences in land values within Chicago; the long-run trend of Chicago land values and its contributing factors are discussed and well supported by tables and graphs. The last chapter, probably one of the most significant in the book, is entitled "The Chicago real estate cycle." Here, again, the statistical and historical approaches to the problem of rising and declining land values are amply treated together with the theoretical implications woven into the analysis. This cycle of real estate is the composite result of "cycles of population growth, of rent levels and operating costs of existing buildings, of new construction, of land values and of sub-division activity.

Mr. Hoyt concludes that the amplitude of the fluctuations in real estate values appears to be considerably greater than that of bank clearings or manufacturing activity; the duration of "prosperity" is much less than the "depression" phase of the Chicago real estate cycle; there is coincidence in the periods of depression in the cycles in real estate, commodity prices and stock prices whereas "peaks for these series occur at widely divergent points"; and real estate cycles may be a passing phase.

More than usual significance attaches to the appendices in which the author gives extended discussions of the Chicago land market; methods employed in determining the value of land, together with a score of statistical tables which supplement those in the text.

JOSEPH DEMMERY

HULVEY, C. N. *The mathematics of finance: principles and problems.* (New York: Macmillan. 1934. Pp. x, 306. $3.)

KRAEMAR, E. and ERDMAN, H. E. *History of coöperation in the marketing of California fresh deciduous fruits.* Bull. 557. (Berkeley: Calif. Agric. Expt. Sta. 1933. Pp. 121.)

LYON, L. S. *The economics of free deals, with suggestions for code-making under the NRA.* (Washington: Brookings Inst. 1933. Pp. xv, 227.)

MACDONALD, W. *The menace of recovery: what the New Deal means.* (New York: Macmillan. 1934. Pp. ix, 401. $2.50.)

A detailed criticism of the recovery program covering the year 1933. Deals particularly with price-fixing, process taxes, crop subsidies, labor policy, and executive dictatorship.

MAGILL, R. F. and HAMILTON, R. P., editors. *Cases on business organization.* Vol. I. (St. Paul: West Pub. Co. 1933. Pp. xv, 533.)

MÉQUET, G. *Les leçons du plan quinquennal.* (Paris: Alcan. 1934. Pp. 252.)

MORLEY, L. H. and KNIGHT, A. C., compilers. *Business directories: a key to their use.* (Newark: Business Information Library. 1934. $2.)

PATON, W. A., editor. *Accountants' handbook.* (New York: Ronald. 1933. Pp. xlii, 1873.)

SHERWOOD, J. F. *Modern accounting: principles and procedure.* (Cincinnati: Southwestern Pub. Co. 1933. Pp. iv, 358.)

SIMMAT, R. *The principles and practice of marketing.* (New York: Pitman. 1933. Pp. 264. $3.)

TERBORGH, G. *Price control devices in NRA codes.* (Washington: Brookings Inst. 1934. Pp. 45. 50c.)

Discusses provisions for the fixing of minimum prices; provisions against selling below individual cost of production; open-price provisions; and control of production.

THORNTON, F. W. *Financial examinations.* (New York: Am. Inst. Pub. Co. 1933. Pp. x, 282.)

TOSDAL, H. R. *Introduction to sales management.* (New York: McGraw-Hill. 1933. Pp. xiii, 418.)

WHITNEY, S. N. *Trade associations and industrial control: a critique of the N. R. A.* (New York: Central Book Co. 1934. Pp. xi, 237. $3.)

WINAKOR, A. H. *Maintenance of working capital of industrial corporations by conversion of fixed assets.* Bull. no. 49. (Urbana: Univ. of Illinois Bur. of Bus. Res. 1934. Pp. 43.)

WOLL, M. and WALLING, W. E. *Our next step: a national economic policy.* (New York: Harper. 1934. Pp. x, 199. $2.)

Discussion, by exponents of organized labor, of the current movement for the control of capital and increasing the power of labor. The basic cause of the depression is excessive profits and deficient mass purchasing power; the inflation of private profit through public credit is a specious remedy; there must be a control of profits and prices; the government must control credit; and the nation must seek national economic independence.

*Anti-depression legislation: a study of the acts, corporations, and trends growing out of the "battle with depression."* (New York: Am. Inst. of Banking. 1933. Pp. 188. $1.50.)

*Defaults on European dollar bonds.* Bull. no. 67 (gen. bull. on securities in default). (New York: Inst. of Internat. Finance. 1934. Pp. 22.)

*Depreciation: a review of legal and accounting problems.* (New York: State Law Reporting Co. 1933. Pp. 207. $1.85.)

*Federal Trade Commission decisions.* Vol. XVI. *Findings, orders and stipulations, December 24, 1931, to July 17, 1932.* (Washington: Supt. Docs. 1934. $1.50.)

*Mortgage Bankers Association of America: proceedings of the twentieth annual convention, October 10-11, 1933.* (Chicago: Mortgage Bankers Assoc. 1933.)

*Municipal odd rate bond values tables.* (Boston: Financial Pub. Co. 1933. Pp. 764.)

*New York Stock Exchange year book, 1932-1933.* (New York: N. Y. Stock Exch. 1934. Pp. 167.)

*Profitable investment simplified: vital facts about 50 leading stocks.* (New York: Financial World. 1933. Pp. 116.)

*The Texas Corporation: report of the stockholders investigating committee.* (New York: Texas Corp. 1934. Pp. 22.)

## Capital and Capitalistic Organization

### NEW BOOKS

Lechtape, H. *Die Wandlung des Kapitalismus in Deutschland: Grundfragen der Wirtschaftssoziologie.* (Jena: Fischer. 1934. Pp. ix, 102. RM.5.)

Mooney, J. D. *The new capitalism.* (New York: Macmillan. 1934. Pp. xii, 229. $2.)

Pirou, G., and others. *La crisi del capitalismo.* (Firenze: Sansoni. 1933. Pp. vi, 198. L. 15.)

This small volume contains five essays and an analytical bibliography. Gaëtan Pirou discusses capitalism as it has been analyzed by French economists indicating both the criticism of, and the trends toward, planned economies. He concludes that capitalism has been weakened by inter-mixture with politics, but that it possesses the vitality to survive unless the foresight of adaptive evolution is lost. Werner Sombart emphasizes the relations between the spiritual and philosophical movements in Germany and the current social and economic thought, indicating that most of the blame is traceable to the failure of the political mechanism properly to perform its functions. He divides those who discuss current problems of capitalism into three rather arbitrary categories: reactionaries who look to a return of the older order; conservatives who choose to defend the status quo of an evolutional capitalism; and reformists who elect completely to reconstruct economic society and, perhaps, human nature as well.

E. F. M. Durbin, in summarizing the contemporary economic thought of England, implies that the collapse of American prosperity and the subsequent breakdown of international finances form the major facts from which his countrymen critically survey capitalism. The three major problems which occupy current attention are stated as: laissez-faire plus private initiative *vs.* a planned economy; free trade *vs.* protectionism; and money, credit, inflation, and the price level. Though England definitely leans toward conservatism, four viewpoints are given: neo-classicism, neo-socialism, communism and fascism. Professor E. M. Patterson's appraisal of the economic crisis in the United States indicates the discard of the theory of rugged individualism and the adoption of a bent toward a new but

more stable, planned, and controlled society. The more important post-war developments such as the reorganization of our monetary and financial affairs, inflation, price problems, tariff legislation, war debts, technocracy, agricultural problems, and the usual array of economic ills listed to the discredit of capitalism, which is supposed to have its last stand in the United States, are briefly summarized. But, he concludes, it is too early to forecast the direction which ultimate changes will take.

The last essay, that of Ugo Spirito, considers the general problem of economic planning from a theoretical standpoint. The bibliography, which was prepared by Giuseppe Brugguier, is divided into two sections: (1) definitions and historical development; and (2) transformations of capitalism after the World War in Italy, France, England, United States and Germany. The bibliography will be particularly useful to students who desire to obtain a survey of the contemporary critical economic thought in the various nations without doing extensive reading and research.

Pervading the volume is an intangible reluctance at having to plan a society; but there is a gentle, unyielding attitude that such planning will be done.

FLOYD F. BURTCHETT

## Labor and Labor Organizations

*The Human Problems of an Industrial Civilization.* By ELTON MAYO. (New York: Macmillan. 1933. Pp. 194. $2.00.)

Within the compass of this rather brief book, Professor Mayo presents the results of important scientific investigations into the human problems of modern industry. With characteristic ingenuity he has woven together the story of collaborate studies by the Harvard Fatigue Laboratory, the Industrial Research Department of the Harvard School of Business Administration, and the Harvard Division of Anthropology. These studies demonstrate the logical unity in a variety of approaches—biochemical, medical, industrial, anthropological—to an understanding of the human problems of our industrial society. "Problems of human equilibrium and effort are not completely contained within the area controlled by factory organization and executive policy. Certain of the sources of personal equilibrium, and especially the low resistance to adverse happenings in the ordinary work-room, must be attributed to the developing social disorganization and consequent *anomie* which is in these days typical of living conditions in or near any great industrial center." *Anomie,* or planlessness, in our industrial society changes the essential character of administrative problems, both in government and industry. New responsibility falls upon the administrator as social controls in the area of human life and action become weaker. It is in the province of administration, he believes, that most civilizations have broken down. Our problem today is therefore to discover an "administra-

tive elite," aware of the human and social problems of industrial organization. If "at all the critical posts in communal activity we had intelligent persons capable of analyzing our individual or group attitude in terms of, first, the degree of logical understanding manifest, second, the non-logic of social codes in action, and, third, the irrational exasperation symptomatic of conflict and baffled effort; if we had an elite capable of such analysis, very many of our difficulties would dwindle to the vanishing point. . . . We have too few administrators alert to the fact that it is a human social and not an economic problem which they face. The universities of the world are admirably equipped for the discovery and training of the specialist in science; but they have not begun to think about the discovery and training of the new administrators."

As a result of fatigue studies, it is concluded there is no single simple form of organic fatigue, but rather many fatigues, which are identifiable organic disabilities due either to defective capacity in the individual, or to some external condition which "interferes" to make continuance of work impossible. Fatigue disabilities are rapidly cumulative in effect, and, once manifest, they speedily stop the performance. The alternative to these disabilities is the achievement of a "steady state," a condition of equilibrium or stability, which permits the almost indefinite continuance of the activity. Laboratory studies lend no support, it is claimed, to the "business-economic" theory of a fatigue, gradual in onset, which is related to the depletion of fuel reserves.

"Monotony" also finds no simple equivalent in fact. As earlier studies have indicated, individual differences, and variations in personal and social situations, must be taken into account. Repetition work remains the same from the beginning to the end of the working day, but new "interferences" arise in the general work situation, which upset the general equilibrium, and are reflected in the records of output.

Among the most interesting chapters of the book are those which describe in chronological sequence the industrial research program carried on by the Western Electric Company at their Hawthorne works over a period of more than five years. The study began with a small segregated group of five women workers, who were to be the subject of controlled experimentation, in an attempt to discover the causes of variations in efficiency, measured in output. This study showed that regardless of hours worked, rest periods, lunches, and other variations arbitrarily introduced in working conditions, the output of these workers continued to advance slowly for three years, until it finally steadied at a record maximum. Twenty thousand employees of the company were interviewed in the course of the investigation.

MARGARET ELLIOTT

*University of Michigan*

*No More Unemployed.* By John B. Cheadle, Howard O. Eaton and Cortez A. M. Ewing. (Norman: Univ. of Oklahoma Press. 1934. Pp. 124. $1.35.)

We might as well frankly face the fact that unemployment exists solely because we are too flabby to banish it. The task of organizing the unemployed to produce for their own requirements is by no means stupendous and might be accomplished in any one of a number of ways well within the bounds of democratic action. The inhibiting factor is not inherent but derives from inertia, prejudice, and vested interest. The book under review not only presents a feasible and attractive method of bringing together idle men and idle machines, to produce the goods of which the men in question have urgent need, but it also shrewdly seeks to disarm the inevitable opposition.

The general proposal involves the establishment of an Industrial Stabilization Corporation which would organize unemployed workers, call for bids for the manufacture of the goods the workers wished to consume, and arrange for the distribution of those goods. Practically all payments would be made in special notes redeemable in the commodities produced by the organization. Any necessary exchange of these notes for cash would take place in a free market on the same principles as apply in the exchange of an inconvertible currency for a gold unit or for some other paper money.

The authors seek to preserve the valuable features of ordinary competitive enterprise and to make such contacts as develop between the ordinary and the proposed productive organization beneficial to all concerned. Taken as a whole, the activities of the proposed Corporation would not interfere at all with existing industrial and commercial enterprise (a matter about which there is undue concern in administrative circles) though this will not readily be admitted by those who see bogies in every bush. The Industrial Stabilization Corporation will not itself undertake any production, which will be done by existing agencies under contract; and, even if total production failed to increase to the full amount of the contracts let by the Corporation, entrepreneurs would not suffer since it would make no difference to any given entrepreneur whether he was working on orders for the Corporation or those which had come through the more usual channels.

In only one feature does the plan seem to the reviewer to be seriously deficient. No provision is made for training workers for new jobs. If the bulk of workers now unemployed have formerly been engaged in the capital goods' industries, and there is now slight demand for such products, the now idle workers must be taught new tricks. So long as the population wants consumption rather than capital goods, there is no good reason for failing to develop consumption goods' industries up to any limit,

at the expense of capital goods' production. Sooner or later the demand for capital goods, for replacement purposes, must of course appear. In the meantime a shift of workers may be necessary and they must be retrained. It should not be forgotten that our task is to provide employment for idle men rather than idle machinery.

The advantages in facilitating necessary economic adjustments, which would attend the establishment of an organization ready to offer a job to all able and willing unemployed workers would, in the long run, be only slightly less than those associated with the complete clearing up of cyclical unemployment. *No More Unemployed* presents proposals, on both these points, which challenge consideration.

FRANK D. GRAHAM

*Princeton University*

## NEW BOOKS

DALTROFF, E. M. *The foundation of industrial stability.* (London: P. S. King. 1933. Pp. vii, 139. 7s. 6d.)

We have here a specific plan for the prevention of unemployment. The author insists that full employment is possible only when purchasing power is distributed in a way that will assure continuous demand for the products of industry. This requires a proper balance between the various industrial groups concerned. To achieve this end a balanced wage relationship is more important than adjustments of money and credit. In fact wages, being advance payments, constitute the most dependable and effective kind of credit.

The proposed plan calls for the establishment of a common minimum wage for all domestic industries by raising the wages of the low-wage groups. After this "internal balance" has been secured, the minimum wage must be gradually increased in order to provide sufficient purchasing power to absorb the growing volume of output resulting from inventions and increased productive efficiency. Control would rest with a central wage board.

The reviewer feels that more should have been said regarding the technique of control, especially with respect to adjustments of wage rates. As for the general thesis, the author has presented a well rounded argument. In addition to supplementing the growing literature on the problem of stabilization, the book should prove of interest to students in the field of labor theory.

J. E. MOFFAT

KÄHLER, A. *Die Theorie der Arbeiterfreisetzung durch die Maschine: eine gesamtwirtschaftliche Abhandlung des modernen Technisierungs-prozesses.* (Leipzig: Hans Buske. 1934. Pp. 148. RM.6.)

MCCABE, D. A. *National collective bargaining in the pottery industry.* (Baltimore: Johns Hopkins Press. 1932. Pp. x, 449. $3.50.)

This study begins with a description of the United States Potters Association and the National Brotherhood of Operative Potters through which organizations collective bargaining has been conducted. Attention is then turned to the agreements covering the two major branches in the industry

—the general ware branch, embracing tableware, and the sanitary ware branch, caring for toilet fixtures.

For about 30 years there has been a national agreement in the general ware branch. The exceptional circumstances which appear to account for the rise and continuance of this agreement are that: (1) the employers desired the support of labor in getting and retaining tariff protection; (2) the localization of the industry in a few centers contributed to a community attitude toward the industry on the part of both the employers and employees; (3) through the agreements it was possible to effect such adjustments in piece rates as to put all employers on the same per unit labor cost basis and aid in maintaining uniform selling prices.

In the sanitary ware division of the industry there were also numerous common interests, although here the tariff did not operate as a cohesive factor. There were common interests with respect to wage rates and the maintenance of uniform labor costs. But with the development of non-union competition, there was no longer labor cost equality as a basis of competition throughout the industry. The union refused to make concessions until the employers decided not to renew the agreement, and then when the union officials offered concessions the employers felt they were better off without the union. Consequently collective bargaining in this branch of the industry collapsed in 1922.

The field work for this study was completed in 1928 and the descriptive account of the industry relates mainly to conditions existing at that time, although the more important developments since then have been added.

H. LaRue Frain

Maher, A. G. *Ohio wage earners in restaurants, 1914-1932.* (Toledo: Information Bur. on Women's Work. 1934. Pp. 14. 10c.)

Palmer, G. L. *Thirty thousand in search of work.* (Harrisburg: State House. 1933. Pp. 93. 30c.)

The Pennsylvania Employment Commission has maintained a demonstration employment office in Philadelphia since February, 1932, "for the purpose of experimenting with standards and techniques that might be adopted by a nation-wide system of public employment exchanges." This study analyzes "important economic and social characteristics of the 31,159 applicants" who registered there in the first eight months of operation.

The analysis is presented in 37 pages of text with seven charts and in 30 appended tables. The applicants were a representative group predominantly native born and white; 69 per cent of the applicants registered were between 21 and 40 years of age while 52.8 per cent of the gainfully employed population of the city are of these ages. There was an "abnormally high" concentration in the ages 36 through 45. Nearly half of those listed had worked five years or longer on the longest job recorded; about 12 per cent had worked over 10 years; 336 worked from 25 to 49 years. Over 80 per cent of these work seekers supported dependents; nearly 21 per cent had four or more. These facts bear out the summary conclusion stated:

"An unusually highly skilled and experienced group of workers was seeking work in the spring and summer of 1932. Contrary to the current popular impression that public employment offices serve mostly unskilled, casual workers, this survey reveals many highly specialized workers in a

wide variety of occupations and professions registered in a public employment office."

C. E. P.

Panandikar, S. G. *Industrial labour in India.* (New York: Longmans Green. 1933. Pp. 299.)

Stein, E., Raushenbush, C. and MacDonald, L. *Labor and the New Deal.* (New York: Crofts. 1934. Pp. 95. 50c.)

This is one of the best of the many articles and monographs which have attempted to evaluate the NRA in its relation to labor. It points out that no single labor provision in the law or the codes is new and that the newness of the NRA resides in the fact that it has extended the area of application of earlier measures.

This being the case, the authors enter the difficult field of constitutionality. They reprint a number of well-known decisions of the Supreme Court on these measures. They argue that the Court is more antipathetic toward labor than Congress and conclude that the labor provisions of the NRA are likely to be declared unconstitutional.

The argument is plausible and some of the "interpretations" of the collective bargaining clause of the NRA by General Johnson and Donald Richberg suggest that the Administration would rather modify the law than challenge the Court. But the Supreme Court especially under Chief Justice Hughes is not indifferent to political considerations and should not be. It has, too, a long series of dissenting opinions on all these cases and needs only to swing one member over to the liberal side to change its whole attitude. Practically, then, the problem of getting legal acceptance of the new legislative program is not as difficult as the citation of earlier decisions would indicate.

All argument about the constitutionality of the new legislation is somewhat unreal. If the NRA succeeds, it will have to be constitutional. If it does not, it makes no difference whether it is constitutional or not.

Norman J. Ware

Welch, E. H. *Employment trends in Philadelphia.* (Philadelphia: Pennsylvania State Employment Commission. 1933. Pp. 106.)

This report, an outgrowth of the study of the Philadelphia labor market initiated by the State Employment Commission in 1932, is confined almost entirely to those changes in opportunities for employment which usually take place over a relatively long period and are of somewhat permanent character. In Part 1, which is based upon the Census of Occupations data, pursuits are analyzed as to whether they are increasing or decreasing in their demand for labor, the extent of such increases or decreases, and changes in the relative importance of the various fields of work in Philadelphia; in Part 2, based upon Census of Manufactures data, the direction and extent of changes in the demand for labor in the various manufacturing industries are analyzed; and in Part 3, manufacturing industries are classified according to the timing and amplitude of their seasonal fluctuations, as these facts are revealed by the Philadelphia Federal Reserve Bank's indexes of employment.

At a time when the attention of students and relief agencies is inevitably concentrated upon the effect of the depression in the various industries,

a study of these long-run trends, covering the period 1900-1930, is extremely worth while. These long-run changes are less apparent and well known than immediate prospects for employment, but community training and guidance programs inevitably have to be based upon a knowledge of them. In part the trends revealed by Mr. Welch and his associates reflect the declining relative importance of Philadelphia as a manufacturing center, and especially the more rapid decrease there than in the nation as a whole in the demand for skilled hand trade workers and male factory operatives, rather than changes in opportunities for employment in the various pursuits in the entire country; and comparable studies in other cities would be of tremendous value in providing a factual basis for a national program of vocational guidance. Some analysis of the causes of the increases and decreases in employment in the various lines is interwoven with the discussion of the trends; and there seems to be a tacit assumption that the revealed changes of the last 30 years afford fairly satisfactory basis for prediction as to future trends.

Royal E. Montgomery

*Employment fluctuations and unemployment of women: certain indications from various sources, 1928-31.* Women's Bur. bull. 113. (Washington: Supt. Docs. 1933. Pp. 236. 15c.)

*Labour organization in Canada: twenty-second annual report for the calendar year 1932.* (Ottawa: H. M. Stationery Office. 1934. Pp. 145. 25c.)

*Maintenance of the rights in course of acquisition and the acquired rights of migrant workers under invalidity, old-age and widows' and orphans' insurance.* Internat. labour conf., 18th sess. (Geneva: Internat. Labour Office. 1934. Pp. viii, 224.)

*Methods of providing rest and alternation of shifts in automatic sheet-glass works.* Internat. labour conf., 18th sess. (Geneva: Internat. Labour Office. 1934. Pp. 69.)

*Partial revision of the convention concerning employment of women during the night.* 18th sess., rep. vii. (Geneva: Internat. Labour Office. 1934. Pp. 28.)

*Unemployment reserves: supplementary report of the special commission on stabilization of employment of the Commonwealth of Massachusetts.* House rep. no. 1301. (Boston: State House. 1934. Pp. 69.)

*Women at work: a century of industrial change.* Women's Bur. bull. no. 115. (Washington: Supt. Docs. 1933. Pp. 51. 5c.)

## Money, Prices, Credit and Banking

*Twenty Years of Federal Reserve Policy.* By S. E. Harris. Vol. I. *A Survey of Federal Reserve Policy.* Vol. II. *The Monetary Crisis.* (Cambridge: Harvard Univ. Press. 1933. Pp. xxxix, 431; 436-865. $7.50, the set.)

This is the most complete and careful history of the policy pursued by the Federal Reserve Board and federal reserve banks during the first two decades of their existence which has yet been written; probably indeed the most complete that ever will be written. Professor Harris has

ransacked official and semi-official literature for expressions of individuals and records of acts which throw light on the changing objectives and changing techniques of reserve system policy, and has brought together an amazing number of relevant historical and statistical data. As the material is closely documented and the bibliographies very full, future students of reserve system policy will find the volumes indispensable.

The organization of the material presents considerable difficulties, and the solution is not entirely satisfactory. In Volume I the major divisions relate to the instruments of control and the technical operations of the reserve banks—rates, discount policy, open-market operations, moral suasion, eligibility regulations, and so on. Volume II, which deals with the years after 1926, is arranged chronologically. The organization of Volume I enables the writer to minimize duplication of historical detail, since it is not difficult to determine under which type of operation a given action is to be classified. It does involve duplication, however, in the presentation of the reasons which lie back of the events discussed and the consequences which flowed from them. For instance, Chapter 4 deals with the objectives of rate practices, Chapter 8 with the objectives of open-market operations—but the objectives of the two are substantially the same.

Professor Harris' main interest is in recording the acts and the views of responsible individuals rather than in establishing a thesis as to proper reserve system policy. He does offer a great many appraisals of particular policies, but these are scattered throughout the book and nowhere brought together in a systematic statement. Likewise the doctrinal views of other students and those of administrative officials are usually cited in connection with details; almost nowhere is there an attempt to summarize or criticize comprehensively anyone's theory of credit control or of system administrative responsibility.

I shall follow Professor Harris' example in this regard and make no attempt to summarize his critical material, which in general seems to me to be sound, though it is not supported with the thoroughness with which his statements of historical fact are validated. There is a tendency to dismiss an issue with the statement that an action was or was not justified in the author's opinion, or that a certain writer's position does not convince him, without giving the reader a chance to judge the adequacy of the reasons on which the conclusion rests.

Two points of theory seem to call for criticism. First, at various places it is implied that money rates in the open market are fixed otherwise than in accordance with the familiar law of supply and demand. Thus it is suggested (page 531) that "banks pressed by speculators will increase their charges to all customers, even though in the long run credit

is not absorbed." Now, if credit is not absorbed by loans to speculators it must be because the money advanced to speculators passes through their hands to those who would otherwise be applicants for bank credit, thereby decreasing demand at other points as much as it is increased at the speculative focus. If total supply of funds is not decreased, and if "absorption" by the stock market is ruled out as insignificant, there seems to be no basis for a generalization that other rates will rise, no matter how high stock market rates may go. (Statistical evidence throws no light on it, since the period of rising rates was the period when the federal reserve system was selling securities and raising rediscount rates, and was also one of expanding business activity.)

Again the author suggests (page 490) that when the Bank of England raised rates to attract foreign money, the result might have been to attract so much money that the rate would be driven down to where inadequate supplies of foreign money would be maintained. But surely if this happened the inadequate supply would drive rates so high that an adequate (or excessive) supply would be attracted!

Again (pages 601, 603), Professor Harris seems to accept Keynes's distinction between a bull market with opinion divided and a bull market with a consensus of opinion, though it seems obvious that at any moment the actual prices of securities represent a balance between the opinions of those who expect higher prices and those who expect lower prices; if there were a consensus in favor of higher prices there could be no sales at present prices. The market would already be higher.

My second point of disagreement relates to the policy which ought to have been pursued by the reserve system in dealing with gold imports. Professor Harris believes (pp. 370-71) that the responsibility of the reserve banks is "to determine the most desirable level of member bank balances (not necessarily a stable level) and to hold within the limits of its power balances at that level." He does not see any reason why reserve authorities should deprive member banks of additional reserves resulting from economies or evasions (such as shifts to time deposits or reductions in currency circulation), which would not hold equally for additions resulting from gold imports. But there is a fundamental difference; one involving the basic principles of the gold standard. Gold inflows result from a disequilibrium in the balance of payments which the gold movement itself tends to correct, to the extent that it is allowed to bring about easier money in the country gaining gold and tighter money in the country losing it. Open-market operations of central banks which offset these movements (unless they are known to be purely seasonal or temporary) tend to perpetuate the disequilibrium and stimulate further gold movements in the same direction.

It is the business of a central bank to prevent accidental and irrelevant

changes in the reserve supply, or reserve requirements, from causing artificial shortages or surpluses of credit; it is equally their business to see that changes in the supply of reserve money which result from changes in the balance of payments shall be allowed to exert their normal corrective influence—otherwise the international gold standard becomes a farce. In saying that at one point in *Credit Policies of the Federal Reserve System* (p. 318) I say something like what he says on this point, Professor Harris has overlooked the reservation with regard to gold movements made in the footnote on page 317 of the volume referred to.

The index is good in that the selection of items is intelligent and the designations are appropriate, but the page citations are far from complete.

C. O. Hardy

*Brookings Institution*

*Die Goldbewegungen nach Frankreich in den letzten Jahren* (*Ursachen und Wirkungen*). By Sudhir Sen. (Bonn: Author, Helmholtzstr. 4. 1933. Pp. 152.)

This brochure gives an excellent analysis of the factors which were involved in the accumulation of gold by the Bank of France. From 1917 to September, 1926, its stock of gold remained about the same. It rose from 29 billion francs on June 25, 1928, to 82 billion francs on June 24, 1932, an increase of 180 per cent.

The law of August 7, 1926, which provided for a *de facto* stabilization of the franc, empowered the Bank of France to accumulate foreign exchange in unlimited amounts and to buy gold and silver at prices above par. Its importations of gold may best be divided into two periods, the first beginning August 7, 1926, when the law referred to went into effect, and the second period beginning June 15, 1928, when the gold standard was definitely re-adopted by France. This law created a new franc of 65.5 milligrams of gold .9 fine, the new figure corresponding to a devaluation coefficient of 4.924, in comparison to the old franc.

It is clear that during the first period the Bank of France played a direct rôle in the importations of gold. During the second period its connection with importations of gold was more complicated because the gold points were then in effect and were supposed to have free play. For the second period, therefore, all the factors which tend to influence the supply and demand of foreign exchange must be considered. While the Bank of France probably did not directly promote the importation of gold during the second period, it is nevertheless clear that a large part of the influx of gold to France after the legal stabilization of the franc in June, 1928, was due to the liquidation of the foreign exchange which had been accumulated prior to that time. It is also to be noted

that there had been private buying of francs for speculative purposes which looked toward its stabilization in 1928. Also, when this time approached and immediately afterward, there was considerable repatriation of French capital which had previously fled abroad. The high call loan rate in the United States did, indeed, counteract these influences to some extent. The sum total was still much in favor of France.

When England was on the verge of being forced off the gold standard in 1931, French private banks withdrew their short-time English investments. Capital also flowed to France from other continental countries as a result of the financial crisis of 1931, and in October of that year there was considerable liquidation of dollar credits by French holders, all of which served to augment the flow of gold to France. It is to be pointed out, however, that the Bank of France did not liquidate its holdings of pounds even when England was known to be in imminent danger of suspending gold payments, although this later subjected the Bank of France to a loss.

Sudhir Sen does not think that it was necessary for France to have gone through the period of *de facto* stabilization between 1926 and 1928. The huge amounts of foreign exchange which were accumulated during this period (it is estimated that the Bank of France held at the end of that period 400 millions of dollar exchange) served as a basis of accentuating the inflation in the United States, whereas their withdrawal early in 1932 tended to intensify the deflationary influences which were then prevalent.

It is clear now what damage has been done by the world's indulgence on such a large scale in short-time international credits in the post-war period. Sudhir Sen believes that if the franc had been definitely stabilized on a gold standard in 1926, some of the undesirable effects caused by the movements of international short-time capital might have been avoided. He points out that the discount policy of the Bank of France during the years 1930 and 1931 favored the importation of gold. Her discount rate was low, but still comparatively too high. In December, 1930, the New York Federal Reserve Bank lowered its rate to 2 per cent, and in May, 1931, cut it down to 1½ per cent, while the Bank of France maintained a rate of 2 per cent. Sudhir Sen expresses the opinion that if the Bank of France had pursued a more energetic and effective discount policy to ward off the influx of gold, and if it had coöperated at once with other central banks immediately after the financial crisis in Austria, without making its coöperation dependent too much on political concessions, the worst effects of the financial crisis of 1931 might have been avoided.

William F. Hauhart

*Southern Methodist University*

NEW BOOKS

Atkins, W. E. *Gold and your money.* (New York: McBride. 1934. Pp. 164. $1.75.)

Barnes, H. E. *Money changers versus the New Deal: a candid analysis of the inflation controversy.* (New York: Long and Smith. 1934. Pp. 150. $1.)

Bennett, E. *A consumer credit technique for restoring employment: arguments for the enactment of a National Consumer Credit act making equal grants of purchasing power to all citizens.* (Madison, Wis.: Author. 1933. Pp. 57. 30c.)

Bigo, R. *Les bases historiques de la finance moderne.* (Paris: Colin. 1933. Pp. 216. 10 fr.50.)

This book gives a survey of the development of banking and of the machinery of the stock market in France down to the beginning of the nineteenth century, thus providing a historical background for the study of their present organization. Being intended for the general reader, it contains little with which the specialist in the history of financial institutions is likely to be unfamiliar. It is, however, the work of a scholar who is at home in the field, and shows evidence of wide reading in the source materials.

Part 1 contains a short review of the activities of the various types of money-lenders, "financiers," and exchange dealers who constitute the precursors of the modern banker, but it is devoted chiefly to the history of the successive banks of issue. Excessive note issues resulting from enormous loans to the state brought about the downfall of the first of these institutions—that established by John Law—and the disastrous effects of the inflation and of the mad orgy of speculation, in which the whole elaborate structure of his "system" collapsed, prevented for fifty years the establishment of a second bank of issue. This, in the form of the Caisse d'Escompte, was in turn undermined by the abuse of public credit which eventuated, upon the advent of the Revolution, in the ruinous débâcle of the assignats. The section on the banks of issue closes with a short account of the establishment of the Banque de France and of the successive decrees by which it acquired the monopoly of note issue throughout the country.

In Part 2 the author traces the origin of the public debt, the creation of the various forms of government bonds, the introduction of stocks and shares, the early operations and organization of the brokers, and the several changes in the locus of the Paris market as it moved or was driven from the long and narrow Rue Quincampoix to the present palatial Bourse.

W. H. Wynne

Bouniatian, M. M. *Crédit et conjoncture.* (Paris: Giard. 1933. Pp. vii, 143. 20 fr.)

The larger part of Professor Bouniatian's book is devoted to an endeavor to refute what he terms the "new doctrine of credit," a post-war development having its genesis in the monetary theory of the English "currency school" of the nineteenth century. According to the "new doctrine," the cyclical fluctuations in economic life are purely monetary in nature and arise from price changes which are the result of variations in money and credit, the volume of which may be expanded or contracted at will.

The theory attributes to banks, which are the chief dispensers of credit, the power to "create" credit, and hence the power to act on prices and to direct economic activity.

Professor Bouniatian contends that credit cannot be "created," and accordingly that banks cannot affect the price level and the direction of the business cycle. On the basis of statistics for the United States and England, he cites the fact that almost one-half of total bank deposits are time deposits, and hence could not have been "created." In accounting for demand deposits, he gives data for the United States showing that total national payments—90 per cent of which are made by check—amount to nine times the national income. A considerable residue of such immense payments must of necessity be on deposit at any given time. Therefore, Professor Bouniatian maintains that demand deposits largely represent the circulating capital of society, and that a bank's function is restricted to the safe and profitable investment of funds entrusted to it by its depositors, during both depression and prosperity.

In support of his views, Professor Bouniatian presents statistics covering nine major attempts of the federal reserve banks to influence credit and price conditions through open-market operations, and maintains that each intervention failed because of offsetting developments set in motion by the reserve banks' actions. To prove that credit is a passive and not an active element in price and trade movements, Professor Bouniatian gives data for the United States and England, showing that in periods of rising activity, prices and trade expand more proportionately than deposits, while in times of declining activity, prices and trade contract more proportionately. The insufficient increase in means of payment during the former periods is made up by a rise in their velocity or turnover, while during the latter periods the insufficient decrease is offset by a fall in velocity.

In conclusion, the author presents his theory of progressive variation of value, which is based on the relation of the supply of each individual good to the degree of its indispensability, the value varying inversely and to a greater extent than the supply. Fluctuations in supply and demand are a constant source of variation in the price level, by means of which progressive general price movements occur. Under his theory, there is no place for "managed" currency or "managed" economy.

Robert E. Landman

Chapman, J. M. *Concentration of banking: the changing structure and control of banking in the United States.* (New York: Columbia Univ. Press. 1934. Pp. xi, 388. $5.)

Clark, V. S. *What is money?* (Boston: Houghton Mifflin. 1934. Pp. 88. $1.)

A very elementary explanation of money and its relation to prices, attractively written by an historical student of the subject.

Copeland, M. T. *International raw commodity prices and the devaluation of the dollar.* Bus. res. stud. no. 5. (Boston: Harvard Grad. School of Bus. Admin. 1934. Pp. v, 69. $2.)

In order to ascertain whether prices respond promptly to changes in the price of gold, Dr. Copeland selected 13 commodities having a world market in order to be able to differentiate, as he has done, between domestic and

foreign influences on their prices. The commodities used were copper, lead, zinc, tin, silver, raw sugar, rubber, coffee, raw silk, raw cotton, raw wool, butter, and wheat. Copeland tabulated and charted their domestic and foreign prices for the years 1926-1933, and gave particular attention to their behavior during the period of October 22 to December 30, 1933, in which the gold-purchase program was in force.

The conclusions reached constitute a damaging refutation of the Warren theory insofar as the relationship of the price of gold to the prices of these commodities is concerned. As compared with the rise in the price of gold during this period, the New York prices of six of the commodities declined, the prices of four rose much less than the price of gold, the price of one rose almost as much as the price of gold, and the prices of two rose more than the price of gold. The charts and tables also show that the prices of these basic commodities fluctuated together very closely in all markets until their relationships were interfered with by governmental action. Briefly, Copeland concludes (p. 33): "One may even doubt as to whether the program for devaluing the dollar actually has had any immediate effect on the prices of these sensitive commodities. Certainly if there has been any direct effect, that effect has varied radically as between the several commodities. . . . The cold facts prove that over a two months' period prices of the most sensitive commodities have not risen in accordance with the changes in the paper value of gold, and that lack of correlation cannot be explained by seasonal factors." Although Copeland states (p. 37) that the ultimate effects of the gold-purchase plan cannot be foreseen from a mere two months' experiment, he believes that the immediate effect of the plan is to defeat its own ends, that it tends to increase the existing maladjustments of commodity prices, and that it retards the return of real prosperity. Incidentally, he holds that the theory of the commodity dollar is unworkable and that there is small likelihood that continuous inflation of any type will be controlled.

Walter E. Spahr

Doring, F. *Gold oder Papier?* (Munich: Callwey. 1934. Pp. 47.)

Dulles, E. L. *The dollar, the franc and inflation.* (New York: Macmillan. 1933. Pp. vii, 106. $1.25.)

A brief account of the fortunes of the franc in the decade following the war, by the author of *The French Franc.* This study, however, aims to discover the lessons of inflation in France as they may be related to possible inflation in the United States.

Edie, L. D. *Dollars.* (New Haven: Yale Univ. Press. 1934. Pp. 293. $2.50.)

Ellinger, B. *This money business: a simple account of the institutions and working of the banking and financial world.* (London: P. S. King. 1933. Pp. 141. 6s.)

As stated on the jacket, this book comprises "a simple account of the institutions and working of the banking and financial world." It considers the subject from the English standpoint. Being written for the layman, it is extremely elementary, but the subject matter is well and clearly presented. It should be valuable to either American or British lay readers who desire a non-technical analysis of the operation of English financial institutions.

F. A. B.

FISHER, I. and FISHER, H. W. *Inflation?* (New York: Adelphi. 1933. Pp. 104. $1.50.)

FOELSKE, H. E. *The inflation folly: shall we inflate the dollar or merely deflate unjust debts?* (Boston: Christopher. 1933. Pp. 61. $1.)

FORSTMANN, A. *Wege zu nationalsozialistischer Geld, Kredit und Währungspolitik: Grundlagen positiver Wirtschaftsgestaltung.* (Berlin: Reimar Hobbing. 1933. Pp. 251.)

GIFFORD, J. L. K. *The devaluation of the pound.* (London: P. S. King. 1934. Pp. viii, 112. 5s.)

Mr. Gifford has written too incautiously and too soon to gain a hearing from either audience he hopes to reach. The academician will be disappointed by careless and unconvincing use of statistics, by repeated resort to enumeration of political variables when economic logic weakens, and by a style that is none too facile. No politician will give close attention to specific recommendations on monetary policy that were framed before November, 1933.

The book under review has a mission, rather than a message. Its purpose is to condemn England's break with gold and the subsequent depreciation of sterling as well as to promote immediate return to gold at the rate of 80 francs to the pound. The author tentatively argues that the abandonment of gold was avoidable, given appropriate international coöperation and British grit. Even though a formal suspension were necessary, exchange rationing and slow deflation should have been instituted to avert exchange depreciation. The depreciation which occurred brought no good to England, in the guise of higher prices and a sheltered export movement, and nothing but evil to everyone else, through intensified deflation. The author's proof that the decline of sterling "let loose a chain of events which have proved to be a world disaster" consists mainly in a convincing but not altogether pertinent demonstration that many prices declined after September, 1931.

In his deductive display of the harm latent in exchange depreciation, the author undertakes a comparison of the efficacy of a dozen devices that have been or might be used for remedying deficiencies on international account. The purely economic evaluation is equivocal. Mr. Gifford's opinion is that selection must be made on grounds of political advisability, that of all the measures deflation (as very inaptly explained) alone is unlikely to invite retaliation, that it is desirable for adjustment to be made when trade is good.

Mr. Gifford advocates England's resumption of gold payments for the following reasons: the example will be persuasive; general tariff revision will be facilitated; there is no bargaining advantage in the *status quo*. So far as the domestic situation is (was) concerned, a price increase is not prerequisite to business recovery, and the national-debt burden can be lightened by conversion.

The devaluation to 80 francs per pound is a blunt recommendation; it is not a "for example" sort of proposal. The author's assurance that his is the "right" rate ill becomes one who deplores the post-war frailty of gold standards, who stresses the disconnections between national gold price levels, who belittles international capital movements, and who is intolerant of monetary management.

E. S. SHAW

GOLDSCHMIDT, R. W. *Bankkredit und Kreditbanken in den Vereinigten Staaten, 1920-1932.* Veröffentlichungen des Instituts für Finanzwesen an der Handelshochschule Berlin, Band 4. (Berlin: Junker und Dünnhaupt. 1933. Pp. 141. RM. 8.)

This little volume, issued in January, 1933, is a concise history of American banking since the war. It describes carefully the various phases of American banking development and the forces which have led to bank failures and to banking concentration. Although the book was written at a time when the Reconstruction Finance Corporation was expending hundreds of millions of dollars in an effort to bolster up the banking system, Dr. Goldschmidt clearly recognized that more drastic and far-reaching measures were necessary to solve America's banking problems. He indicates that two fundamental readjustments are essential. These are, first, the elimination of a large number of small banks, for which there is no economic justification, together with the extension of branch banking and, secondly, the elimination of all those activities of banks which are not directly connected with commercial banking. Dr. Goldschmidt's prediction that bank failures were by no means at an end and that further difficulties would be encountered has proved to be very well founded.

The volume is well written and, although subsequent developments somewhat reduce the significance of Dr. Goldschmidt's conclusions, his study is a worth-while contribution to the literature of American banking.

M. NADLER

GREGORY, T. E. *Gold, unemployment and capitalism.* (London: P. S. King. 1933. Pp. xvi, 308. 12s.)

It is seldom that one has the opportunity to read a sounder, more satisfying collection of articles and lectures than that included in the volume under review. The book contains six essays on gold, two on America, two on central banking, three on international trade, and five on unemployment and capitalism. All but three of the entire group have been written since 1929, and the majority of them accordingly deal with various phases of the world depression.

The articles on America have to do with the banking position in this country in 1925 and with the panic of 1933. Their most interesting feature, from the standpoint of the American reader, is the fact that they contain a much clearer insight into the American situation than is displayed by most of the English writers. On the subject of central banking, one article is a reprint of a paper delivered at the annual meeting of the American Economic Association in 1924; the other, "Observations on the Central Reserve Bank bill" in Australia, contains an excellent summary of the requisite elements for the sound functioning of central banking institutions.

Of the articles on international trade, two, "Common sense and the balance of trade" and "Self-sufficiency as an economic ideal," are particularly incisive and comprise effective answers to those favoring the current movement toward economic isolation. The argument is especially effective because the claims of the isolationists, where at all valid, are given ample consideration.

In the final section of the book, one article, "An economist looks at planning," deserves particular mention. Economic planning is definitely demonstrated to be futile without control of consumption. It may be followed successfully only in those lines where demand is fairly regular and business is of a routine nature. But, for the bulk of production and distribution, free enterprise, regulated through the markets, is superior. Many of the present advocates of planning are impelled by desire for power and control over others, rather than for the real economic betterment of society. But, in spite of its patent, and also less obvious, weaknesses, the urge to plan is nowadays so strong that Professor Gregory is not overly optimistic about the future.

FREDERICK A. BRADFORD

HUBBARD, J. B. *The banks, the budget and business.* (New York: Macmillan. 1934. Pp. xiv, 147. $1.75.)

JOHN, E. *Goldinflation und Wirtschaftsentwicklung: gibt es "lange Wellen" der Konjunktur?* (Vienna: Oesterreichischer Wirtschaftsverlag. 1933. Pp. 149.)

KNIFFIN, W. H. *Better banking.* (New York: McGraw-Hill. 1934. Pp. x, 434. $3.50.)

LE BRANCHU, J. Y. *Essai sur le gold exchange standard.* (Paris: Recueil Sirey. 1933. Pp. ii, 270. 35 fr.)

This volume is perhaps the best treatise that has so far appeared on the gold-exchange standard. The author severely criticizes the establishment of this standard and vigorously attacks the theory that it constitutes a remedy for the gold shortage. He further denies that a gold shortage actually exists and clearly shows how the introduction of the gold-exchange standard was inflationary in character and seriously weakened the international credit structure. The gold-exchange standard, if it was to work at all, had to be based on coöperation between the leading central banks of the world. However, such coöperation was entirely lacking; and the author cites the experience of the Nederlansche Bank, which although assured that it would not suffer any loss on its sterling deposits, was ultimately forced to take such losses.

In addition to describing in full the organization and operation of the gold-exchange standard in the post-war period, the author makes a careful analysis of the mechanism of the gold standard proper, of the post-war experience with the gold-exchange standard in comparison with its operation in certain oriental countries before the war and of various other monetary standards.

M. NADLER

LEE, C. *Personal trust administration: manual for banks and trust companies.* (Cambridge, Mass.: Bankers Pub. Co. 1934. Pp. 311. $5.)

LEONG, Y. S. *Silver: an analysis of factors affecting its price.* Pub. no. 49. (Washington: Brookings Institution. 1933. Pp. xiv, 168.)

This little book maintains the reputation of the Brookings Institution for making timely and authoritative contributions to economic knowledge. Simply, clearly, and completely it presents statistical data on the price, production, and economic significance of silver. There is also a brief but

adequate discussion of the silver provisions of the Thomas inflation measure. The book was written prior to the silver agreement of the London Conference and the President's silver-purchase regulation.

The statistical evidence presented demonstrates that silver has been less a sufferer from depression than other metals, that it is of trivial financial importance as a commercial product, that it is a negligible item in United States materials production, that its price decline has not destroyed the purchasing power of the Orient, and that artificial enhancement of its price serves no economic purpose.

The book wisely avoids political criticism and economic controversy; but the facts presented constitute an exposure and a condemnation of the shameless propaganda and shabby subsidies of the past year.

NEIL CAROTHERS

LEWIS, A. B. and LU-LUAN, C. *Silver and the Chinese price level.* Bull. no. 11 (new ser.). (Nanking: Univ. of Nanking, Coll. of Agric. and Forestry. 1933. Pp. 39.)

LOMBARD, L. *L'or, regulateur de la production.* (Paris: Recueil Sirey. 1933. Pp. 128. 15 fr.)

This is one of the numerous volumes on the rôle of gold as a monetary standard which have appeared in recent months. The author seems to be of the opinion that the world's monetary stock of gold is not sufficient to support the volume of credit necessary to finance the interchange of commodities both national and international. In order to remedy this situation, he suggests that warehouse certificates be issued for other metals such as silver, zinc, copper, lead, aluminum, and tin and that these warehouse certificates be used to supplement gold as a basis for credit. The author apparently overlooks the fact that under the conditions which have prevailed for the last few years, gold has practically ceased to be a basis for credit in a number of countries and that the volume of credit now bears little relation to monetary gold stocks.

Although one may not agree with some of the conclusions, the volume is well written and contains a mass of information which is not readily available in other volumes of a similar size.

M. NADLER

MENDENHALL, J. E., and others. *Debt relief: an aid to recovery.* Nat. crisis ser. (New York: Teachers Coll., Columbia Univ. 1933. Pp. 29. 15c.)

———. *Our government's relation to money, banking and securities.* Nat. crisis ser. (New York: Teachers Coll., Columbia Univ. 1934. Pp. 29. 15c.)

PASVOLSKY, L. *Current monetary issues.* (Washington: Brookings Inst. 1933. Pp. xiii, 192. $1.50.)

Deals with the breakdown of the gold standard, recommendations of experts at Geneva, the London Conference, and the gold-purchase plan. Of aid is the collection of documentary appendixes covering some 50 pages. The author is engaged upon a more extended and technical study for the Institute of Economics, but in view of the importance of the problem under consideration it was decided by the Institute "to bring those studies to a sharp focus at this time upon the immediate problem which is confronting the United States."

Pirotte, S. *La clause-or devant la loi et les tribunaux.* (Paris: Recueil Sirey. 1933. Pp. 210.)

This timely volume will be of considerable importance to lawyers and economists who are interested in the merits of the gold clause. The book is divided into five chapters of which Chapter 2, dealing with the law, and Chapter 3, dealing with judicial decisions, are the most important. The author has collected a large number of decisions before the French and other courts dealing with the interpretation of the gold clause. As a rule, one may say that in domestic contracts involving two residents of the same country, the gold clause has not been upheld. On the other hand, the French courts were more or less unanimous in upholding the validity of the gold clause in contracts between foreigners and French citizens.

The volume, however, deals chiefly with European decisions and does not concern itself with the decisions rendered in the United States courts. Although the author endeavors here and there to treat of the economic aspect of the gold clause, this is merely of secondary importance. The merits of the book lie entirely in its legal aspects and its bringing together of a mass of cases on the subject. With the abrogation of the gold clause by the United States the value of the book for American readers has been greatly increased.

M. Nadler

Puxley, H. L. *A critique of the gold standard.* (New York: Harper. 1934. Pp. 272. $3.)

Rist, C. *Essais sur quelques problèmes économiques et monétaires.* (Paris: Recueil Sirey. 1933. Pp. xvi, 501. 70 fr.)

In this volume are included a number of the best known essays of Professor Rist going back to 1907, as well as a number of his articles and letters dealing with economic questions. The volume is divided into four parts, the first of which deals with monetary problems. Of this section the essay on the stabilization of the franc, published in 1925, is well known. Of more interest at the present time is an article written in 1932 on the operation of the gold standard. Professor Rist clearly points out that the breakdown of the gold standard was not the result of inherent defects in the system as such but rather in the economic conditions prevailing at the time. He considers the open-market operations of central banks, the high tariff walls, the large expenditures of the governments and the abnormal political conditions which prevented the free flow of capital and credit from one country to another, as the main causes of the abandonment of the gold standard. His criticisms, although written early in 1932, are as true today as they were then.

Part 2 comprises some theoretical discussion of which the essay on the theory of savings, published in 1922, is the most important. Part 3, called "Statistical and economic interpretations," includes several articles written before the war. The best known of essays in Part 3 include that on the economic situation of Austria, prepared prior to the stabilization of the currency in 1923, and the essay on the character and origin of the world crisis of 1929, written in 1931. Professor Rist predicted at the time that the crisis would be solved either through readjustment of production to consumption, or through open or disguised inflation. Many of his prophecies came true, particularly in respect to events in the United States.

The fourth part of the volume deals with economic and political questions, of which the first two consider reparations. As early as April, 1919, in his essay, "War indemnities and foreign trade," Professor Rist clearly pointed out that the national wealth of a country is no sign of its ability to pay a war debt; for war debts can be paid only through an excess of exports over imports, and that Germany's ability to pay reparations would depend on the willingness of the Allies to receive commodities from Germany. If only the statesmen who framed the Treaty of Versailles had listened to the arguments presented by Professor Rist, the entire history of reparations would have been different. The second part of Section 4 on economic conditions for the payment of reparations is written in the same vein. The author presents in terse fashion the London Ultimatum of 1921 and points out that under no conditions could Germany have paid the indemnity imposed at that time.

The essays and articles are written in a clear, lucid and forceful style. Many of the problems discussed in the volume will be read with considerable interest and profit by present students of economics and finance.

M. Nadler

Sprague, O. M. W. *Recovery and common sense.* (Boston: Houghton Mifflin. 1934. Pp. 96. $1.)

This small volume deals more particularly with the devaluation and stabilization of the dollar.

Taeuber, W. *Geld und Kredit im Mittelalter.* (Berlin: Carl Heymanns. 1933. Pp. xiii, 361. RM. 32.)

G. F. Knapp founded his state theory of money upon the fact that debts exist, and (according to Taeuber) upon the conjectural history that states have treated such debts from the beginning as they have treated them in the recent past: *i.e.,* according to the formula "Mark equals Mark." For Knapp it was an historical fact, indeed an historical necessity for the state to consider debts in this nominal fashion.

Taeuber attempts in this monograph to answer historically (for the years 800-1500) the following questions: "*Is it true* that the state has at all times treated debts as nominal debts? Is "Mark = Mark" really the abiding principle throughout the history of monetary laws" (p. 4)? The *Gründlichkeit* with which Taeuber performs his task is indicated by the 943 footnotes.

Taeuber makes some suggestive analyses. One of these does more than answer the questions which he posits as his problem. It concerns the viewpoint of the Middle Ages to the juristic problem of money debts (pp. 29ff). In 1863 Wilhelm Endemann said the decision had been for the nominal value *because* at that time the nature of money was viewed from the nominal point of view, and that the decisions could only follow logically from the theory of money. In 1868 Gustav Hartmann denied this. According to him, decisions in the Middle Ages concerning debts in terms of money were based on fine metal content; the nature of money was viewed from the point of view of the metallic content. Taeuber says to the unprejudiced observer the documents show as clearly as daylight (*Sonnenklar*) that the jurists decided in favor of the fine metal content. *But* (and this is the important matter) the decisions were not based upon either of the theories of money mentioned—or upon any other theory of

money. They were indifferent to all monetary theories. This, it might be suggested, is a conclusion of importance.

KARL R. BOPP

VAN DILLEN, J. G., collector. *History of the principal public banks, accompanied by extensive bibliographies of the history of banking and credit in eleven European countries.* (The Hague: Martinus Nijhoff. 1934. Pp. xii, 480. Gld. 14.)

WERNETTE, J. P. *Money, business and prices.* (London: P. S. King. 1933. Pp. v, 102. 5s.)

This small book purports to be an analysis of the business cycle in relation to money. The author stresses the variations in spending as a cause of the cycle, and concludes that the best remedy for the depression is an increase in spending engineered through inflation. Although Dr. Wernette introduces a number of interesting analyses with regard to spending, such unsupported dicta as the statement that, in 1928 and 1929, "the United States was neither over-producing nor mal-producing" (p. 98), together with a choppy and uninteresting style, go far to destroy whatever value the book might otherwise possess.

F. A. B.

*Banking and transportation problems.* Annals, vol. 171. (Philadelphia: Am. Acad. of Pol. and Soc. Science. 1934. Pp. 320. $2.)

*Economie libérale et économie dirigée: l'étalon or.* Travaux du Congrès des Econ. de Langue Française, 1933. (Paris: Domat-Montchrestien. 1933. Pp. 189.)

*Member bank income and expenses for the calendar year 1933.* (Boston: Federal Reserve Bank of Boston. 1934. Pp. 4.)

*One hundred years of the Suffolk Savings Bank for Seamen and Others: a history of the origin and growth of the bank with sketches of its officers together with a description of the waterfront of Boston as it was in 1833.* (Boston: Suffolk Savings Bank for Seamen and Others. 1933. Pp. 82.)

*Operations of the postal savings system, 1933.* House Doc. No. 132. (Washington: Supt. Docs. 1934. Pp. 58.)

*Statements of condition of federal land banks, joint stock land banks, federal intermediate credit banks, compiled from reports of the banks as of December 31, 1933.* (Washington: Supt. Docs. 1934. Pp. 49.)

## Public Finance, Taxation, and Tariff

*Double Taxation of Property and Income.* By A. L. HARDING. Harvard stud. in the conflict of laws, 1. (Cambridge: Harvard Univ. Press. 1933. Pp. x, 326. $3.50.)

In 1930 the Supreme Court ruled that Minnesota could not levy an inheritance tax on Minnesota state and local bonds owned by an individual who had died domiciled in New York. This was the first of a series of decisions which marked a definite shift in the Court's attitude toward double taxation by competing jurisdictions under property and

death taxes. To discover what if any unifying principle underlies the American cases on this subject is the task that Professor Harding set for himself. He concludes that there is such a principle, although the courts have failed to state it explicitly. Whether he has correctly read the courts' minds the present reviewer professes no competence to judge, but the principle he enunciates must be of special interest to economists. In a stimulating manner, throughout his ably written, well ordered volume, the author presses his point of view that the courts have in reality been saying that the test of jurisdiction to tax is the concept of "economic integration."

However this concept may be defined in detail, it seems clear that if the Supreme Court follows it to the same logical conclusion as does Professor Harding, the graduated personal income tax as a state fiscal instrument based on ability to pay will be seriously weakened. The state of residence, for instance, would have no power to tax income arising directly from real estate located outside the state. The present study is therefore of vital significance to all students of public finance.

Moreover, to the economist in general it offers suggestive problems. What is "economic integration?" "Property, goods, labor, services, and the like," or, more generally, "wealth" is economically integrated in a state when it is "being used in the coördinated economic task of the social group" or is "producing utility or wealth or service in connection with, as part of, and because of the economic solidarity of the social group" (p. 42). Real estate and many forms of tangible personalty can be readily located under this concept, but intangible property offers more difficulty. It appears, from the author's remarks with respect to shares of stock (p. 98), that in certain instances an intangible may not be economically integrated in any state, in which case the presumption raised by the *mobilia* maxim seems to be determinative. The economist might also note that in a certain economic sense, no new wealth is created when a mortgage is laid on real estate, and if the real estate as wealth is already "economically integrated" in one state, can the mortgage as wealth also become economically integrated at all? Admittedly the law of taxation has paid scant respect to this concept of wealth, but this is perhaps beside the point if the law is henceforth to be tested by an economic criterion—even though the author at some points indicates that common law must come before economics (*cf.* p. 94—"However true this may be for the purposes of economics . . .").

More fundamental is the question that naturally arises: Should there be a single test, such as economic integration, for all types of tax? A personal income tax, for instance, differs, in its reason for existence, from a long-capitalized land tax. The advantages claimed for the integration theory seem chiefly to apply to business taxes, as, for example, where

it is said that "it is necessary that the tax burden of the competitors be approximately the same" (p. 43.). The tax system as a whole, however, is made up of a group of structures resting on differing foundations, and it may not be advisable to make one formula applicable to them all.

Obviously, the above remarks offer no constructive answer to the problem so ably attacked by Professor Harding, but they may serve to indicate the thought-provoking qualities of this significant contribution to tax literature. In the words of Professor Beale in the preface, "no thinker or writer on the subject can hereafter afford to ignore his brilliant generalization and his careful investigation of the material."

CARL SHOUP

*Columbia University*

*The Principles and Problems of Federal Finance.* By BHALCHANDRA P. ADARKAR. (London: P. S. King. 1933. Pp. xviii, 301. 12s. 6d.)

In the conception and treatment of the acute problems in public finance now confronting the federal states, as distinct from the centralized governments, this treatise is both original and valuable. In the federal states there are three, instead of two, hungry political bodies to be fed; and the division of functions and sources of revenue constitute challenging problems for finance ministers. After setting forth in lucid style the constitutional foundations of the federal state, the author makes a brief but penetrating survey of the financial systems of the leading federations, including the United States, Germany, Switzerland, Canada, South Africa, and India. Following this factual presentation comes a refreshing theoretical analysis of the problems peculiar to the federal state. In academic classification this volume is a noteworthy contribution to the domain of comparative public finance, designed primarily to portray the fiscal experience of the peoples of various federations in order that other states may avoid their mistakes or profit by successful solution of similar problems.

Because "financial sovereignty is an indispensable ingredient of political sovereignty," and because principles of public finance are modified by the economic development and political framework of the state, the author guides the thought to the underlying principles of taxing power and fiscal functions, with special reference to the United States—a phase too often neglected by the American writers since David A. Wells. While four of the examples of the federal states fall within the British Empire, the author finds a tendency for systems of government founded under strictly different auspices to follow the same fiscal policy towards increasing centralization, greater use of direct taxation, and a reversion to indirect taxation following the Great War.

Of particular interest to the American reader is Professor Adarkar's criticism, as an outside observer, of our strait-jacket Constitution and

the ensuing rigidity and stereotyped financial relations and distribution of revenues between federal, state and local governments. "Double taxation, overlapping tax jurisdictions, duplication of administrative machinery, multiplicity and variety of tax formulas and forms of inequality of fiscal arrangements are some of the many evils that have made the American system of finance a mere hotch-potch of conflicting notions." The relations between state and federal government, which in the formative period were based on a cut-and-dried separation of sources, are now "mixed" and in "a nebulous condition." It is easy to agree with many of the conclusions of this keen observer. The comparative study in Part II is an excellent contribution to the field of public finance.

To the factual presentation it is difficult to take exception, but in the theoretical treatment of Part III the reviewer dissents with the conclusion that Seligman's distinction between "social reform" and "socialism" is of the order of the celebrated distinction between Tweedledum and Tweedledee. Nor does it follow from the sacrifice theories, assuming an equality of average human behavior, and the Law of Diminishing Utilities, that "utilities will be maximised if transfers are effected from the richer sections of the country to the poorer," since the diminishing utility principle is founded upon uniformities in human nature and not the social order. The author objects to the practice of isolating the sacrifices incurred by taxation without a consideration of the benefits derived therefrom, since the net result of taxation might indicate no *net* sacrifice. Exponents of the minimum and least aggregate social sacrifice theories have sought to impress the need for imposing the smallest total sacrifice, but for the most part have ignored the offsetting benefits from public expenditure. Furthermore, the author is too pessimistic concerning the possibilities of indexes of taxable capacity. Progress in the science of public finance must rest to an increasing extent upon the accuracy with which it can measure its subject matter, and simply because statistical method has been delayed in reaching the vital problems of federal finance, there is need for tolerance rather than rejection of its achievements. These, indeed, are but minor criticisms of a painstaking and highly commendable theoretical analysis. On the whole, this book fills a unique gap in the literature of public finance.

Ernest H. Hahne

*Northwestern University*

*La Commission des Douanes et la Politique Commerciale des Etats-Unis.* By Snoy et d'Oppuers. (Brussels: L'Edition Universelle. 1932. Pp. iv, 286.)

In this doctorate thesis, the author presents a well prepared analysis of the United States Tariff Commission and its rôle in American commercial policy.

The opening chapters describe American commercial policy (traditional protectionism in behalf of high wages and standard of living, equality of opportunity for all sections and industries, influence of local interests, absence of national viewpoint), the emergence of a new tendency arising from the incapacity of Congress to cope with the intricacies of the tariff, the growth of log-rolling and lobbyism, the trend toward delegation of powers to commissions, and the needs of the economic situation which brought about the present function of the Tariff Commission. The change from an unfavorable to a favorable balance of trade and from debtor to creditor, as well as the exportation of capital, normally should have led to a change in tariff policy to permit repayment of debts and return of capital in goods. But politics prevented adoption of the needed change. The United States appears unable to fulfill, economically, the great rôle for which the 1918 victory predestined it. Opportunity came too soon.

After a detailed analysis of the history of the Tariff Commission, its successive changes in functions, and its practical results, the author expresses his opinion that evolution has made the Tariff Commission the exponent of the traditional American commercial policy, to protect the social ideal of American wage levels and standard of living. He believes it could promote commercial liberalism, but for such a reversal, so many prejudices and beliefs would have to be overthrown, that the coming of tariff liberalism in the United States must remain in the realm of pure hypothesis. The formula applied by the Tariff Commission, tending more and more toward the equalization of conditions of competition, is clearly anti-economic and directly opposes the principle of comparative advantage, which is the basis of international trade. The elimination of a country's competitive advantage leads to economic self-sufficiency and towards domestic production of all products which could be bought at less cost abroad. By imposing a rigid formula, the flexible clause reduces the possibilities of commercial negotiations and the flexibility of compromises.

The author concludes that the general world tendency to delegate large powers to the executive branches of governments and to replace parliaments by experts in matters of national interest is understandable and normal. He observes, however, that in countries which have resorted to it, the practice of executive tariff powers has thus far resulted only in ceding to momentary protectionist fury and to the passions of restless peoples, and that international "coördination" is the only method left. The surest way of achieving it is progressive: regional and partial agreements, customs unions. Tariff truces constitute the first stage of a movement which must end in a sound organization, in harmony with healthily established commercial currents. In pointing the best way out, the author apparently shared the optimism of many in the period preceding the London Economic Conference.

Although the book was completed just before the 1932 election and quotes the party platforms of that year on the tariff, there is no indication that Snoy et d'Oppuers sensed a possible change in American commercial policy towards reciprocal agreements facilitating the exchange of goods with other countries.

The book is an interesting and critical appraisal. It shows conscientious research and effort, a greater first-hand knowledge of his subject than most foreign students of American conditions obtain, and is well documented.

H. Arnold Quirin

*Washington, D.C.*

## NEW BOOKS

Burns, N. *The tariff of Syria, 1919-1932.* Soc. sci. ser. no. 5. (Beirut: Am. Univ. of Beirut. 1933. Pp. xi, 317.)

Thoroughly annotated, with charts and bibliography.

Caverly, H. L. *A survey of the tax situation in Michigan.* (Ann Arbor: Edwards Bros. 1933. Pp. 66.)

Clarke, G. B. *Tax system of Connecticut.* Ext. serv. bull. 184. (Storrs: Conn. Agric. Coll. 1933. Pp. 19.)

Ford, R. S. *The allocation of corporate income for the purpose of state taxation.* N. Y. State Tax Commission, spec. rep. no. 6. (Albany: State House. 1933. Pp. 130.)

In 1928 the New York State Tax Commission adopted a policy of granting a fellowship annually to a member of the graduate student body of each of several universities. Each fellow was by the terms of the arrangement to be an exceptionally able student prepared to devote practically his full time to writing a thesis on a subject approved by the Commission. It is of interest that the Commission delegated the choice of each fellow to the professor under whom the thesis was to be written. Mr. Ford, author of this sixth monograph, was designated by Professor Seligman of Columbia University.

The problem Mr. Ford has attacked is extremely significant and, by virtue of the recent spread in corporation income taxes, is now more important than when the monograph was finished. The lack of uniformity now existing in allocation procedure results in two sorts of inequity. In some cases interstate corporations are taxed on more than 100 per cent of their incomes, thereby favoring competitors who are engaged solely in intrastate activities; in other instances corporations doing business in two or more states are taxed on less than 100 per cent of their incomes, thereby favoring these as compared with local competitors. Mr. Ford discusses the former inequity at length but largely ignores the latter—presumably on the ground that it occurs in practice much less frequently. However, the discussion is entirely adequate to disclose the major consequences of utilizing each of the allocation principles employed in the several income-tax states.

After his introductory statement, Mr. Ford divides the discussion into four parts. In the first he analyzes the "Legal and economic foundations of the problem." In the second, he examines present state practices. In the third, he attempts an "Evaluation of existing practices." And, in the

fourth, he outlines proposals for reducing or eliminating the inequities of the present situation.

While the work is on the whole effectively done and the monograph extremely valuable, it is marred by two defects. (1) The organization is such that considerable repetition occurs. (2) The pleasure of reading is reduced by physical defects: percentages, chapter numbers, abbreviations of "page," and the form of footnotes are written unconventionally; and several typographical errors occur.

It is seriously to be regretted that the New York State Tax Commission is no longer able to make provisions for the fellowships which resulted in this and other valuable studies of significant tax problems. Doubly is this true in the light of the moderate cost which the Commission incurred for each investigation.

JAMES W. MARTIN

GRAHAM, F. D. *Protective tariffs.* (New York: Harper. 1934. Pp. xi, 176. $1.)

This is another volume in the series entitled "Current Economic Problems," edited by Professor Paul T. Homan, for the purpose of giving college students and general readers cheap editions on timely economic subjects. But Professor Graham has overlooked the fact that Latin is a very dead language for modern sophomores and business men who want enlightenment on tariff policy. Moreover, the book has neither an index nor a detailed table of contents—both essentials to these readers.

The author announces the intention of presenting the case for protection sympathetically, and has done this. He states that there are certain principles in the field of foreign commercial policy which are valid at all times and places; but that under special circumstances the usual corollaries of these principles "should not be drawn with rigor, or should be discarded." He avows the ideal of stating these circumstances; but the reviewer believes his main accomplishment is an argument to the effect that there is "little if any excuse for protection in the United States at the present day" (p. 107). The author recognizes that the transition cannot be painless; and he proposes a method by which Congress may express a policy and have some assurance (through the use of a properly functioning tariff commission) of its realization over a long period of time.

Professor Graham uses the monetary instead of the "labor cost" approach to his problem; but soon reverts to the effectiveness of labor criteria, and in this connection prefers the apt phrase "comparative competence." His point that the infant industry argument for protection rarely applies to agriculture is a timely reminder for American farmers, and our manufacturers need to know that "nurturing protection is no longer needed for the development of this country."

Professor Graham refers to the possible national control of foreign trade by shifting supplies, or orders, *in toto* from one market to another as a potent bargaining weapon which is subject to abuse; to the "vicious type" of discrimination existing in efforts to secure equality of exports and imports as between one country and *each* of the other countries; and, finally, to lack of need for reciprocity treaties in 1934 if statesmen could realize that the benefit of reductions in protective tariff schedules "by any

one country is in no way dependent on counter reductions by other countries." These are passages that the Administration in Washington should read and ponder.

The author's effort to show the relation of the balance of payments position of a nation to its tariff policy will probably fail to register with the lay reader. He would have succeeded much better had he more completely woven Appendix II on "Balancing of claims and counterclaims" into the earlier part of his book.

Robert J. Ray

Leet, G. and Paige, R. M., editors. *Property tax limitation laws.* Pub. no. 36. (Chicago: Public Admin. Service. 1934. Pp. 92. 75c.)

Evidence and arguments for and against limitation law by 24 different writers. Bibliography for the several states.

Pearman, W. I. *Support of state educational programs, by dedication of specific revenues and by general revenue appropriations.* Contribs. to educ., no. 591. (New York: Teachers Coll., Columbia Univ. 1933. Pp. 151. $1.50.)

Renne, R. R. *The tariff on dairy products.* (Madison: Tariff Research Committee. 1933. Pp. 176. 50c.)

Saxe, J. G. *Charitable exemption from taxation in New York State on real and personal property.* (New York: Lincoln Engraving and Printing Corp. 1933. Pp. 77.)

Schultz, T. W. *The tariffs on barley, oats and corn.* (Madison: Tariff Research Committee. 1933. Pp. xvii, 116. 50c.)

Simonide, B. *Vers l'union douanière et économique des Balkans.* Extrait de la Revue *Les Balkans.* (Athens: Ed. "Flamma." 1933. Pp. 63.)

Stauffer, W. H. *School finances in Virginia.* Sen. doc. no. 4. (Richmond: State House. 1934. Pp. 82.)

Swift, F. H. *European policies of financing public educational institutions. I. France.* Pubs. in educ., vol. viii, no. 1. (Berkeley: Univ. of California Press. 1933. Pp. xvi, 179.)

Weber, G. A. and Schmeckebier, L. F. *The veterans' administration: its history, activities and organization.* Serv. monog. no. 66. (Washington: Brookings Inst. 1934. Pp. xi, 490.)

An extensive study of pension policy beginning with the Revolutionary War. Every phase of relief from domiciliary care to cash payments is described. The larger part of the volume is devoted to development since the World War.

White, F. *White on corporations, State of New York. Corporate taxation in New York, with the remedial procedure to correct excessive and illegal taxes and forms and precedents.* By H. M. Powell. Vol. IX. *Corporate taxation.* (Albany: Bender. 1933. Pp. vi, 501.)

*A fiscal and administrative survey of the City of New Orleans.* (New Orleans: New Orleans Tax Rev. Commission. 1933. Pp. 17, iii, 182.)

*Naval expenditures, 1933.* (Washington: Supt. Docs. 1933. Pp. 344.)

*Railway taxation.* Spec. ser. no. 61. (Washington: Bur. of Railway Econ. 1934. Pp. 17.)

*State general sales tax acts: the complete text of state sales tax and gross income tax laws of general application, now in effect.* (Chicago: Commerce Clearing House. 1933. Pp. 142.)

*Taxation of foreign and national enterprises.* Vols. II-V. (Geneva: League of Nations. Boston: World Peace Found. 1933. Pp. 467; 254; 219; 78. $3.50; $2.50; $2; $1.10.)

In 1932 the League of Nations published the first volume of its study of the problem of the taxation of businesses whose property is located in different countries or whose profits arise from transactions not limited to one's own country. In 1933 that study is apparently carried to completion. Volume I dealt with the taxation of national and foreign enterprises by the governments of France, Germany, Spain, Great Britain, and the United States. Volume II continues with the practice of Austria, Belgium, Czechoslovakia, Danzig, Greece, Hungary, Italy, Latvia, Luxemburg, Netherlands, Roumania, and Switzerland. Volume III tells the story for British India, Canada, Japan, Mexico, the Netherland East Indies, the Union of South Africa, and the States of Massachusetts, New York, and Wisconsin.

Volume IV presents the methods of allocating taxable income to the interested national or state treasuries. The studies reported in the first three volumes were edited by Mr. Mitchell B. Carroll. He is the author of Volume IV, the introduction to which is written by Dr. Hans Blau, of Switzerland, president of the League's Fiscal Committee. In this work Mr. Carroll, who personally interviewed tax authorities of the 35 governments above mentioned, has stated the legal and accounting problems involved and has furnished the reader with an interesting synopsis of decisions on this topic by courts of nine nations. Then there follows a statement of the problem of allocation of income in the principal types of international businesses.

Volume V, written by Dr. Ralph C. Jones of the accounting department of Yale University, deals with the special accounting problems which industrial enterprises face in allocating income properly to the different states involved in its production.

JOHN G. HERNDON, JR.

*Uncle Sam and debtors.* Nat. crisis ser. (New York: Teachers Coll., Columbia Univ. 1934. Pp. 23. 15c.)

## Population and Migration

*Introduction to the Vital Statistics of the United States, 1900 to 1930.* By WALTER F. WILLCOX. (Washington: Supt. Docs. 1933. Pp. v, 138. 10c.)

The present study by one of America's foremost vital statisticians is a distinct addition to the history and development and revelations of American vital data. Nineteen diagrams, 95 tables, a packed summary, and careful analysis are included.

While the vital records of particular states are improving, the addition to the federal registration areas of states where relatively more births and deaths escape registration has diluted national records. The non-uniformity of state laws relative to marriage registration makes our marriage statistics less satisfactory than those of comparable foreign countries.

Seasonal fluctuations in mortality and natality have changed. In Massachusetts the range in seasonal natality and mortality has declined. August and September, formerly the most unhealthy months, are now the healthiest in Massachusetts. Seasonal variation in natality is only one-third of that in mortality (20-30 per cent in normal years and higher in epidemic years), having declined two-fifths in 80 years. High mortality and low conception months coincide.

The marriage rate has not changed significantly since the Civil War. The divorce rate, which is lowest in the Atlantic States and highest in the Western States, is four times as high as 65 years ago. Marriage and divorce rates rise in good times and decline in bad times.

American fertility has steadily declined since 1810 at a rate more rapid than in France; in 1930 the ratio of children under five to married women of childbearing age was 58 per cent below the 1810 ratio. Since 1890 the fertility of American wives has fallen one-third. Fertility has declined least in New England and most in the South since 1900. At present fertility and the birth rate are lowest in the Pacific region and (excepting Florida) highest in the South. For the country as a whole native fertility exceeds that of the foreign-born, due to the high native fertility in the Southern states. Native fertility is highest where there are relatively the fewest foreign-born, and vice versa; this inverse relationship does not hold in respect to the relative number of whites and negroes. Between 1850 and 1920 white and negro fertility fell by nearly the same per cent; since 1920 white fertility has fallen more rapidly.

Mortality has fallen for fifty years, the decline being greatest in urban centers where healthfulness has greatly increased. Mortality has declined most among those under 45, declining more than half among those under 30 since 1900. The greatest decline is found in the age period 1-4. Since 1900 the death rate of females at all ages has declined more than that of males whose death rate is one-sixth higher. Negro and white death rates have decreased at the same pace. Since 1900, allowing for age differences, native mortality has declined one and one-half times as much as that of foreign-born whites. Data on death by cause indicate neither the rate of increase in death from cancer nor whether the death rate from cancer has actually increased. Analysis of hitherto unpublished data on the relation between conjugal condition and mortality reveal that at all ages above 20 the death rate of married males is below that of unmarried males, due in part to the "beneficial influence of married life." At ages under 35 mortality is greater among married than among unmarried women, due presumably to the influence of mortality traceable to childbearing.

Joseph J. Spengler

*University of Arizona*

NEW BOOKS

DUBLIN, L. I. and LOTKA, A. J. *The history of longevity in the United States.* Reprint from *Human Biology,* Feb., 1934. (Baltimore: Johns Hopkins Press. 1934. Pp. 43-86.)

GREEN, H. W. *Supplement to population characteristics by census tracts, Cleveland, Ohio.* (Cleveland: Plain Dealer Pub. Co. 1933. Pp. 9.)

STRONG E. K., JR. *Japanese in California: based on a ten per cent survey of Japanese in California and documentary evidence from many sources.* Univ. ser. educ.-psych., vol. i, no. 2. (Stanford Univ., Calif.: Stanford Univ. Press. 1933. Pp. 188. $1.)

*Asylum for refugees under our immigration laws: views of some distinguished contemporaries and of leaders of public opinion of earlier days on asylum, and their application to German political and religious refugees.* (New York: Committee of Ten, 1624 Grand Central Terminal Bldg. Pp. 32.)

*The peopling of Australia.* (Melbourne: Melbourne Univ. Press. Pp. 327. 6s.)

*Population census reports, 1900-1930: topical index.* (Washington: Supt. Docs. 1934. Pp. 75.)

## Social Problems and Reforms

NEW BOOKS

BAUER, J. and GOLD, N. *Permanent prosperity and how to get it.* (New York: Harper. 1934. Pp. xiii, 253. $2.75.)

BEARD, C. A. *The idea of national interest: an analytical study in American foreign policy.* (New York: Macmillan. 1934. Pp. vii, 583. $3.75.)

BEST, H. *Blindness and the blind in the United States.* (New York: Macmillan. 1934. Pp. xxii, 714. $6.50.)

Chapter 17 deals with "Economic condition of blind"; Chapter 20 with "Costs of blindness."

BLACK, J. D., editor. *Research in rural institutions: scope and method.* Bull. no. 18. (New York: Soc. Sci. Research Council. 1933. Pp. 112.)

———. *Research in social psychology of rural life: scope and method.* Bull. no. 17. (New York: Soc. Sci. Research Council. 1933. Pp. 130.)

BRANCH, M. S. *Women and wealth.* (Chicago: Univ. of Chicago Press. 1934. Pp. xvii, 153. $2.)

In an attempt to estimate the relative control over wealth and income exercised by women in the United States, statistical samples were gathered with great care from various localities to show the relative financial importance of women as taxpayers, as owners of property, as gainfully occupied workers, and as buyers and managers of family income.

Though the author does not pretend to cover the entire population, she implies that the samples presented are representative. Actually, however, from the very nature of the statistical sources, it is clear that they provide evidence only on the resources of women whose possessions are recorded in their own names, such as the legacies bequeathed by women, incomes received by women who file income-tax returns, incomes received by women factory workers, and automobiles owned by women who register their own cars. As a matter of fact, even where wealth is registered in a wom-

an's name it is not certain that she exercises control over it: for example, ownership of stock may be simply a device for adjusting an income-tax return.

The chapter on "Women as buyers and managers of family income" provides the sole evidence of the control over wealth exercised by women who live with their husbands, and apparently there is little original material; indeed the footnote references suggest undue reliance on elementary textbooks. After reading this study the reviewer has come to the conclusion that until husbands allow financial remuneration for wielding a dishmop or a vacuum cleaner, and until wives with independent incomes are required to file income-tax returns, the attempt here made is destined to disappointment.

ELIZABETH S. MAY

BRECKINRIDGE, S. P. *Women in the twentieth century: their political, social and economic activities.* (New York: McGraw-Hill. 1933. Pp. xi, 364. $4.)

This book is one of the monographs which formed the basis of *Recent Social Trends in the United States.* Miss Breckinridge has divided her subject into three parts: "Women's use of spare time"; "Women and gainful employment"; "Women and government." The first part deals chiefly with the more serious women's organizations, such as the League of Women Voters, and the more serious activities of other women's organizations, such as the General Federation of Women's Clubs. In the second part she makes extensive use of census data, showing age, marital status and occupation of gainfully employed women. She discusses women in labor organizations, wages of men and women in the same job, women in business, in professions and near-professions. In the third part, is discussed the extent to which women vote, influence party organization, effect blocs, and hold office. Her treatment throughout shows a thorough knowledge of her subject and a consuming interest in it.

The subject, however, is much broader than an account of a "restricted group in its effort toward emancipation." Changes in the activities of women in the last generation and earlier have been only in part the result of the conscious struggle of women to assert themselves socially, economically and politically in a changing world, the aspect of her subject which Miss Breckinridge handles so ably. There is also the more or less unconscious impact of the changing world on women, as a result of which they find themselves with problems they never dreamed of and privileges they never sought. In the economic world, for example, larger incomes have greatly increased the importance of the choice-making functions of the household, and labor-saving devices have given women more time to devote to these functions. How are they meeting these responsibilities? This more elusive side of the subject is omitted. Nor was it treated in any other monograph of the President's Committee on Social Trends.

Miss Breckinridge does not discuss the fall of the birth rate with reference to women's activities, economic or other; yet there are grounds for thinking that nothing which affects the position of American women today is more important than this.

The modern woman of a generation ago was a romanticist. Today she is, imperfectly, of course, a scientist. Her goal is no longer an idealistic emancipation but a realistic self-development. If her main interests are

outside the home, she must evolve new sets of social relationships to attain a balanced life. If her main interests are in the home, as for most women they are, she meets new issues in her growing power to control standards of living. For Miss Breckinridge, the problem of women is their attainment of legal freedom, political freedom, and economic freedom outside the home. But the modern woman is less conscious of her need to attain privileges than she is embarrassed by the responsibilities her privileges have already brought her. Once she was challenged by a grudging society and to a certain extent she still is; yet far more serious now is the challenge of the unforeseen problems and opportunities the new world has unexpectedly thrust into her hands.

ELIZABETH E. HOYT

CHASE, S. *The economy of abundance.* (New York: Macmillan. 1934. Pp. vii, 327. $2.50.)

CONI, E. A. *El estado contra la nación.* (Madrid: Espasa-Calpe. 1933. Pp. 201.)

DAVIS, H. W. *Money sense: an introduction to personal economics.* (New York: McGraw-Hill. 1934. Pp. xi, 256. $2.)

Chapters on economic honesty, punctuality, order and system, budgetary control, use of money, saving, life insurance and speculation, especially addressed to college students. Author has had wide business experience.

ELLIOTT, M. A. and MERRILL, F. E. *Social disorganization.* (New York: Harper. 1934. Pp. 842. $3.50.)

FALLON, V. *Principles of social economy.* Translated by J. L. MCNULTY. (New York: Benziger Bros. 1933. Pp. xxii, 576.)

GEE, W. *Social science research organization in American universities and colleges.* (New York: Appleton-Century. 1934. Pp. ix, 275. $3.)

Chapter 3 deals with case studies being carried on in different colleges and under foundations for research.

HARRIS, J. P. *Election administration in the United States.* Stud. in admin. no. 27. (Washington: Brookings Institution. 1934. Pp. xi, 453.)

HASTINGS, S. *A national physiological minimum.* Fabian tract no. 241. (London: Fabian Society. 1934. Pp. 14. 2d.)

HEPNER, H. W. *Human relations in changing industry.* (New York: Prentice-Hall. 1934. Pp. xiv, 671. $5.)

GEORGE, H. *Social problems.* (New York: Robert Schalkenbach Found. 1934. Pp. 256.)

Reprint of volume published in 1883.

HORACK, F. E. *Legislation pertaining to women and children in Iowa.* Stud. in child welfare, vol. ix, no. 1, new ser. no. 273. (Iowa City: Univ. of Iowa. 1934. Pp. 67. 75c.)

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JAMESON, S. H. *Status and social welfare organizations: a psycho-sociological study.* Soc. sci. ser. no. 4. (Los Angeles: Univ. of Southern California Press. 1934. Pp. 47. 60c.)

LIDBETTER, E. J. *Heredity and the social problem group.* Vol. I. (New York: Longmans. 1934. Pp. 160. $7.50.)

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Moon, P. T., editor. *Current problems of unemployment and recovery measures in operation.* Proceedings, vol. xv, no. 4. (New York: Acad. of Pol. Sci. 1934. Pp. 117. $2.50.)

Mooney, J. D. *The new capitalism.* (New York: Macmillan. 1934. Pp. xii, 229. $3.50.)

Page, K. *Individualism and socialism: an ethical survey of economic and political forces.* (New York: Farrar and Rinehart. 1933. Pp. ix, 367.)

Phelps, H. A. *Contemporary social problems.* (New York: Prentice-Hall. 1933. Pp. x, 783.)

Root, G. C. *Women and repeal: the story of the Women's Organization for National Prohibition Reform.* (New York: Harper. 1934. Pp. 231. $1.50.)

Tufts, J. H. *America's social morality: dilemmas of the changing mores.* (New York: Holt. 1933. Pp. x, 376.)

Yocum, J. C. *Expenditures and apparel buying habits of Ohio State University students.* (Columbus: Ohio State Univ. Bur. of Bus. Res. 1934. Pp. xi, 82. 50c.)

*International survey of social services.* Stud. and rep. ser. M, no. 11. (Geneva: Internat. Labour Office. 1933. Pp. xxiii, 688. $4.)

*An introduction to medical economics.* (Chicago: Am. Medical Assoc. 1933. Pp. 55.)

*Massachusetts Department of Public Welfare, Division of Housing and Town Planning: annual report for the year ending November 30, 1933.* Pub. doc. no. 103. (Boston: State House. 1934. Pp. 12.)

*Public housing surveys: an outline of survey and planning procedure for low-cost housing.* (Chicago: Nat. Assoc. of Housing Officials. 1934. Pp. 20.)

*State laws for public housing: a memorandum on the drafting of enabling acts for public housing agencies.* (Chicago: Nat. Assoc. of Housing Officials. 1934. Pp. 18.)

## Insurance and Pensions

### NEW BOOKS

Crobaugh, C. J. *Annuities and their uses: a non-technical explanation.* (Boston: George H. Dean. 1933. Pp. 155.)

Egger, R. A. *The retirement of public employees in Virginia.* (New York: Appleton-Century. 1934. Pp. xvi, 269. $4.)

Treats of pension systems for civil employees, with chapters on salaries and living costs in the municipal service, the structure and administration of the pension system, and its adaptation to a small municipality. In the appendix is a bibliography of nearly 20 pages. The text is thoroughly annotated. The author was assisted by the Committee on Pensions of the League of Virginia Municipalities, and the volume is published for the Institute for Research in the Social Sciences of the University of Virginia.

Gillingham, H. E. *Marine insurance in Philadelphia, 1721-1800, with a list of brokers and underwriters as shown by old policies and books of record, including an appendix of marine insurance of Archibald McCall, 1809-1811.* (Philadelphia: Patterson and White. 1933. Pp. 133.)

Jannott, K. *Reformgedanken aus dem Versicherungswesen.* Vortrag gehalten am 8. Dezember 1933 auf Einladung des Versicherungswissenschaftlichen Vereins in Hamburg. (Jena: Fischer. 1934. Pp. 36. RM.1.80.)

*Automobile liability surety laws of the United States and Canada, containing legislation enacted and data of official investigating committee appointed September 1, 1931, to September 1, 1933, also the A. A. A. safety-responsibility bill (1932 revision).* 1933 suppl. to 5th ann. ed. (New York: F. Robertson Jones. 1933. Pp. 162.)

## Socialism and Co-operative Enterprises

NEW BOOKS

Savage, H. Jr. *America goes socialistic: an interpretation of our governmental drift.* (Philadelphia: Dorrance. 1934. Pp. vii, 146. $1.75.)

This book is virtually a brief for individualism. It traces the expansion of our governmental activities, portraying the New Deal as merely the speeding up of a movement inaugurated by Alexander Hamilton. A diagram reveals America as having been 10 per cent socialistic in 1860, 20 per cent in 1890, 50 per cent in 1920, and 60 per cent in 1930. Practically every departure from pure individualism is branded by Mr. Savage as "socialistic." Examples mentioned include compulsory education, public parks, progressive taxation, public hospitals and farm relief.

The author interprets governmental expansion as basically the result of choice rather than of necessity. He is disturbed because people appear to prefer economic security to individual liberty. He constantly stresses personal freedom rather than social welfare, defending his position with quotations from Herbert Spencer.

As for the future, three possible courses are suggested. We may return to the earlier individualism, adopt a new form of government to exercise all possible functions, or call a halt and definitely "limit the number of things which may be organized." The author favors the third. We are not told, however, where or how we should fix the limit, or whether the limit should be permanent. The book is well written and interesting, but hardly convincing.

J. E. Moffat

Thomas, N. *The choice before us.* (New York: Macmillan. 1934. Pp. vii, 249. $2.50.)

The author maintains that the more likely "'choice before us" is between fascism and socialism, and that the aim of intelligent effort should be a "coöperative commonwealth," the proper method, "education." In a word, the book is an exhortation to all right (not Right!) thinking and well meaning men to choose socialism in the crisis now upon us.

While there are other possible choices examined in the course of the inquiry, Mr. Thomas is convinced that "capitalism cannot long arrest the processes of its own disintegration" (p. 188) and that a return to the old way is out of the question (Chap. 2). The New Deal, while tending to check the processes of disintegration, cannot save us. The Roosevelt ideal is not and will not be fascist. The road he "has opened will not reach any distant horizon without sharp detours" toward fascism or some form of socialism (p. 165).

There is even the possibility of a new world war. To avoid this "choice" thoughtful antidotes to American participation are suggested which depend, largely, for their efficacy on "those educational processes" which undermine the current common sense of the community embodied in a spirit of nationalism (p. 178).

In the absence of war, then, fascism is the threatening alternative to be avoided. A mild success under the New Deal will not remove this constant threat because workers will protest that profits have come about as a result of governmental supervision, rather than of the individual initiative of great capitalists (p. 165). The ruling class would then feel the need for fascism, which it has not felt hitherto due to the comparative lack of conscious working-class activity. It is pointed out, however, that there are circumstances here and abroad which hinder the introduction of fascism in the United States.

Nonetheless the rise of fascism here is inevitable unless socialism on a broad "united front" is chosen and chosen rapidly enough. To avoid the mistakes made in the fascist countries, white-collar workers and farmers must be enrolled under the banner of a democratic socialism which will not be weak or cowardly and will not subordinate its creed to a rigid conception of democracy, "but will present itself as the fulfillment of what is best in the democratic tradition and the guarantor of a heaven which can be reached without compelling men to pass through the lowest circles of a hell of violence and disorder" (p. 199). In short, if all those who really stand to gain can be made to *think*—"in terms of common sense there is no case at all against" certain socialist notions—this choice can be made; and by intelligent and tolerant use of state power (how it is to be grasped is not made clear) the coöperative commonwealth can be created with little or no attendant violence.

Gustavus Tuckerman, Jr.

Warriner, D. and Shenkman, E. *Results of state trading.* (London: Internat. Coöp. Alliance and P. S. King. 1933. Pp. 112.)

## Statistics and Its Methods

*Production Trends in the United States since 1870.* By Arthur F. Burns. (New York: Nat. Bur. of Econ. Research. 1934. Pp. xxxii, 363. $3.50.)

Production series, each of which extends back into the period 1870-85, have been studied by Dr. Burns to learn more about the secular trend of the physical output of commodities and services. Seven industrial groups are represented: agriculture by 20 series, fisheries by 3, mining by 22, manufacturing by 45, construction by 2, transportation by 7 and trade by 5. There are 104 in all. It is estimated that the total production coverage was 40 per cent in 1925.

The 45-year requirement kept out of the list series representing important industrial groups. Lack of recorded data has kept many other activities out of the tables. This lack of completeness is borne constantly in mind by the author.

Dr. Burns has cut each series up into overlapping "decennial series" with five-year centers but with enough flexibility retained so that each contains an integral number of cycles. An exponential curve fitted by the method of moments was used to determine the average rate of change during each decennial period. Changes in the sub-series rates were averaged in turn by fitting an exponential curve to them. Free use was made of decile charts and frequency distribution tables in order to reveal the nature of the mass movements. Hacking up long series into pieces of arbitrary length is a new process in the study of secular trends. It is a bit unorthodox to allow subjective factors this much freedom, but despite this weakness the method has much to recommend it. Flexibility is obtained with a simple direct action type curve which gives sliding average growth rates in exchange for a minimum of drudgery.

The findings have to do principally with four things—namely, the effect of good times and bad on the divergence of growth rates; retardation as a general phenomenon; "trend-cycles," an economic movement recently introduced to the public and, finally, indices of general production.

Comparison of the simultaneous decade rates disclosed not only the well known divergence but also the fact that in good times the spread has been greater than in bad times. Increasing differences in the rate of growth seem to introduce strains into the economic system necessitating adjustments. While the adjustments are taking place the spread declines.

Conclusions regarding retardation given in the following quotation are based on the analysis of 142 series. "It is difficult to escape the conclusion that retardation in the growth of production has been almost universal among the industries covered, and that the rapidity of retardation has been, on the whole quite appreciable . . . but . . . its march has not been continuous in any of the industries surveyed."

The author makes haste after this sweeping statement to calm the reader's fears by insisting that retardation is characteristic of a progressive economic system. A more important matter was the confirmation of the belief that decline follows expansion almost immediately without an extended stay at the highest level reached.

"Trend-cycles" are slight changes in direction of the secular trend. They have appeared in practically all the series studied and with a few exceptions have appeared simultaneously. Much is made of their conformity. Apparently it is hoped that these more obscure movements will throw light on business cycles which come close to the general run of men. Unfortunately, light does little good when men are blind.

In the last chapter the 104 series are compared with the acceptable physical production indices. Dr. Burns states that the production indices are less reliable than they had been considered and that even the detailed

information secured from this study leaves the whole matter of total production in doubt.

Chapters 1 and 6 are recommended as an antidote for index fever. It is refreshing to find a statistician willing to put general indices in their places. Usually insufficient emphasis is placed on the flaws and shortcomings of statistical data, such carelessness leading ultimately to absurd results. Apparently, Dr. Burns means only to be careful and frank in order to maintain the scientific tradition. However, it is the reviewer's opinion that his exposition of the flaws of production series and indices will be of more immediate benefit than will some of the other parts of the treatise in which he takes more pride.

The entire work is an example of fact finding in its highest form. Whether or not use may be made of it as a guide for those who would lead business and finance in the paths they should follow is a matter for dispute. However, in any case, the results will go into that well of information which, some day, will be drawn on to formulate the new economics.

E. B. DADE

*University of Kansas*

NEW BOOKS

DAWSON, S. *An introduction to the computation of statistics.* (London: Univ. of London Press. 1933. Pp. 192.)

Dr. Dawson's book is an excellent presentation of information and illustrative material relating to tabulation, measures of central tendency and dispersion, sampling, and correlation analyses. The fact that it treats only of these four general phases of statistical interpretation, together with important ramifications, distinguishes it from most texts of recent years, and makes it exceptionally valuable to analysts who wish to refer specifically to them.

The discussion is brief and to the point, informing the reader without the necessity of spending time on obvious or irrelevant facts. In the first chapter, common methods of presenting statistical data are clearly illustrated, including the use of logarithmic paper and an explanation of the way it is constructed. Among the important explanations in the second and third chapters are those relating to the calculation of the mean of several means, the standard deviation from several standard deviations, skewness, and kurtosis. Of considerable importance and interest also are the discussions on Sheppard's correction and the choice of measures of dispersion.

The chapters on sampling and correlation are comprehensive for an elementary text, and the derivation and interpretation of measures are clearly presented. The formulas listed on pages 177 to 183 are very inclusive.

F. H. HARPER

RHODES, E. C. *Elementary statistical methods.* London School of Economics and Political Science, stud. in stat. and sci. method, no. 1. (London: Routledge. 1933. Pp. 243. 7s. 6d.)

As its title indicates, this book describes the simpler and more elementary methods which statisticians use in collecting statistics, assembling statistics in tables, computing derived statistics or ratios, analyzing frequency distributions, computing weighted averages and index numbers, and graphing and analyzing time series. There is no treatment of probability, correlation or related subjects.

The conditions under which statistical inquiries are carried on and the deviations of the resulting data from the ideal are discussed at some length to guard against drawing erroneous conclusions from statistical data. Stress is also placed on the reasons for employing particular statistical procedures.

Due no doubt to the brevity of the book there are numerous omissions of details usually discussed under the subjects treated. Considering this fact and the number of subjects entirely omitted, too much space appears to be devoted to certain specific topics. For example, practically the whole chapter on the analysis of time series is devoted to a discussion of the moving average.

The style of writing is clear and readable and the argument is illustrated by frequent examples drawn almost exclusively from English sources. A minimum of mathematics is employed and none more difficult than the simpler forms of algebra. The manner of writing keeps before the reader the spirit and objectives of statistical inquiry without confusing him with a mass of detail.

This book is intended mainly for students, and although it is scarcely suited as a textbook for American college classes it should be useful for giving the student or general reader a bird's-eye view of the subject.

J. Roy Blough

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## Industries and Commerce

The federal Department of Agriculture has published a volume on *Agricultural Adjustment*, a report of administration of the Agricultural Adjustment act, May, 1933, to February, 1934 (Washington, pp. 393, 25c.). This contains chapters on the objectives of the Act; organization of the emergency program with reference to cotton; to wheat; to tobacco; to corn and hogs; to dairy products; to rice; to special crops; to sugar; to beef cattle and sheep; surplus relief operations; miscellaneous codes and marketing agreements; consumers' counsel; court decisions on constitutionality; incidence of processing taxes; effects on farm buying power; planning for the future.

## Labor

The Women's Bureau of the federal Department of Labor has issued Bulletin No. 111, *Hours, Earnings, and Employment in Cotton Mills*, by Ethel L. Best (pp. 78, 10c.); No. 113, *Employment Fluctuations and Unemployment of Women: Certain Indications from Various Sources, 1928-31*, by Mary E. Pidgeon (pp. 236, 15c.); No. 116, *A Study of a Change from One Shift of 9 Hours to Two Shifts of 6 Hours Each*, by Ethel L. Best (pp. 14, 5c.).

The Department of Labor of the State of New York has published Special Bulletin No. 182, *Causes of Compensated Accidents, Two Years, 1930 and 1931* (Albany, pp. 103); No. 183, *Cost of Compensation Cases Closed in 1932* (Albany, pp. 63).

## Banking

The hearings before the Senate Committee on Banking and Currency on *Stock Exchange Practices* are being published. Thus far 14 parts have been issued, covering the period from May 23, 1933, to February 26, 1934 (Washington, pp. 6419). Parts 1 and 2 contain the testimony of members of the firm of J. P. Morgan and Company; Part 3, Kuhn, Loeb and Pennroad Corporation; Part 4, Dillon Read and Company; Parts 5-8, Chase Securities Corporation; Parts 9 and 10, Guardian Detroit Union Group; Parts 11 and 12, Detroit Bankers Company; Parts 13 and 14, Alcohol Pools.

In addition, hearings before a subcommittee of the Senate Committee on Banking and Currency, dealing with the same subject, have been issued. Part 5 deals with the Insull case; Part 6, with the National City case.

## NOTES

The next annual meeting of the AMERICAN ECONOMIC ASSOCIATION will be held in Chicago, December 26-29, with headquarters at the Palmer House.

The following names have been added to the membership of the AMERICAN ECONOMIC ASSOCIATION since February 1:

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*Economic Essays in Honour of Gustav Cassel,* containing contributions by 50 well known economists, was published during 1933 by George Allen and Unwin, Ltd. The University of Chicago Press has signified its willingness to publish an American edition of these essays, provided there are sufficient

advance orders. The list price of this volume will be $8.00; but a special price of $6.00 will be given to members of the AMERICAN ECONOMIC ASSOCIATION and subscribers to the AMERICAN ECONOMIC REVIEW on orders placed before July 15, 1934. The special rate will be net to libraries. Orders should be sent direct to the secretary of the AMERICAN ECONOMIC ASSOCIATION, Northwestern University, Evanston, Illinois.

The Social Science Research Council announces the establishment of two additional series of training fellowships in the social sciences which will be offered for the first time for 1935-36. One of the new series will be known as pre-doctoral fellowships for graduate study and will be open to citizens of the United States or Canada not over twenty-five years of age who will not have been enrolled in any graduate school for more than one semester before July 1, 1935. Their purpose is to aid exceptionally promising students of the social sciences to obtain research training beginning with the first year of graduate study. The other new series will be known as pre-doctoral field fellowships, and will be open to citizens of the United States or Canada not over twenty-seven years of age who are candidates for the Ph.D. degree, and who will have completed prior to the end of the academic year 1934-35 all courses and examinations for which they are eligible before completion of the thesis. The purpose of these field fellowships is to supplement formal graduate study by opportunities for field work which will assure first-hand familiarity with the data of social science in the making.

The closing date for the receipt of applications for the pre-doctoral field fellowships is December 1, 1934; for the pre-doctoral fellowships for graduate study, December 15, 1934.

The American Statistical Association held a dinner meeting in New York, February 28 for the discussion of "Gold and the Price Level." Among the speakers were Percy E. Barbour, "Is Gold Production Increasing?"; Rufus Tucker, "Gold and Prosperity"; H. Parker Willis, "The Nationalization of Banking"; Harold L. Reed, "Some Difficulties in Administering the Commodity Dollar"; Gustav Stolper, "International Consequences and Repercussions of the American Gold Policy."

On April 24 a meeting was held for the discussion of "Technical Methods of Forecasting Stock Prices."

The annual meeting of the Indiana Association of Economists and Sociologists was held at Notre Dame, April 20-21. Among the papers presented were "The First Year of the New Banking Act," by Herman B. Wells; "County Expenditures in Indiana," by Clement T. Malan; "Economic Opinion and the Industrial Recovery Act," by John A. Ryan; "The Managed Currency Program," by Joseph L. Apodaca; "The Economic Controls," by Waldo F. Mitchell.

The Mississippi Valley Historical Association held its twenty-seventh annual meeting at Columbia, Missouri, April 26-28. Among the papers presented were "Western Attitude toward National Banks, 1873-1874," by George L. Anderson, Lawrence, Kansas; "Debtors' Relief after the Panic of 1819," by W. J. Hamilton, Southeast Missouri State Teachers College; "The Reaction of the Frontier to the Gold Craze," by John L. Conger,

Knox College. One of the sessions was devoted to the subject of "Trails and Migrations."

The eighth annual session of the Institute of Public Affairs was held at the University of Georgia, May 8-15, under the auspices of the Carnegie Endowment for International Peace. Among the papers presented were the following: "Subsistence Homesteads and Our Future National Economy," by M. L. Wilson; "The New Deal in Agriculture," by B. H. Hibbard; "The Agricultural Adjustment Program," by Henry A. Wallace; "Economics of the New Deal," by H. Parker Willis.

The Mid-West Economic Conference was held at Northwestern University, March 23-24. The following topics were discussed: "The Future International Economic Policy of the United States," led by John Ise, University of Kansas; "The Meaning and Scope of Economic Science," F. S. Deibler, Northwestern University, chairman; "Government Regulation of the Investment Market," J. E. Kirshman, University of Nebraska, chairman; "Monetary and Banking Problems (discussion based on the so-called Chicago memorandum)," Garfield Cox, University of Chicago, chairman; "Price Maintenance and Trade Association Activity," Paul D. Converse, University of Illinois, chairman; "Crop Limitation under the A.A.A.," B. H. Hibbard, University of Wisconsin, chairman; "Some Economic Implications of the Shorter Work Week," J. A. Estey, Purdue University, chairman; "The Transportation Problem (discussion based on the so-called Eastman report of January 20, 1934)," D. Philip Locklin, University of Illinois, chairman; "Federal Taxation Today and Tomorrow," E. S. Todd, Miami University, chairman.

The Guilds of America Foundation has prepared a plan for incorporating nationally into the industrial fabric of the United States a modernization of the old guild system, under NRA rules. The plan includes the following points: (1) salvaging small industries; (2) industrial decentralization; (3) a modern version of the old guild idea; (4) technical education for craftsmanship. The plan is discussed at length in a recent volume by Henry Creange, published by the Foundation, 228-9 Hotel Vanderbilt, New York City (pp. 324, $3.75).

Northwestern University School of Commerce has recently completed the 1934 series of lectures on "Ethical Problems of the Recovery Program," given on the William A. Vawter Foundation on Business Ethics. The series included "Social Values," by Arthur J. Todd; "Political Values," by Herbert D. Simpson; "The Development of the Industrial Plan," by Vanderveer Custis; "The Interest of the Farmer," by Fred E. Clark; "The Making of Codes," by Earl D. Howard; "The Field of Labor," by Frederick S. Deibler; "The Financial Aspects," by James W. Bell.

The second issue of the *Southern Economic Journal*, January, 1934, contains articles on "Southern Wage Differentials under the NRA," by Mercer G. Evans, Emory University; "The Financial Condition of Railroads in the South in 1933," C. K. Brown, Davidson College; "A Note on the Mississippi Sales Tax," by Alfred W. Garner, Mississippi State College. This journal is published quarterly (11 Commerce-Journalism Building, Athens, Georgia).

The Pacific Council of the Institute of Pacific Relations is publishing a quarterly entitled *Pacific Affairs*. The March issue contains articles on "The Effects of the Economic Crisis in Netherlands-India,' by J. H. Boeke; "Japanese Immigration in Brazil," by J. F. Normano; "A Historical Study of Capitalism in Japan," by Saburo Matsukata; "A New Study of China's Rural Population and Vital Statistics," by W. L. Holland. The office of the business manager is at 129 East 52nd Street, New York City; and the price $2.00 per annum.

A new quarterly journal entitled *Bulletin Economique du Maroc* has recently been established by the Bibliothèque Générale du Protectorat, Avenue Biarnay, Rabat-Agdal, Morocco.

A new journal entitled *Archiv für Bevölkerungswissenschaft und Bevölkerungspolitik* is published by the Verlag von S. Hirzel in Leipzig. The first number appeared in November, 1933. It is issued six times a year.

Beginning with January, 1934, the *Weltwirtschaftliches Archiv* will appear six times a year.

Professor Paul Haensel has prepared a schedule showing the model American federal, state and local tax systems. Copies of this sheet may be had by addressing him at 724 Simpson Street, Evanston, Illinois.

Mr. Robert S. Field, 5322 Gainor Road, Philadelphia, has prepared a mimeographed memorandum entitled "Some Tariff Data,' based on the statistical information presented in a report of the United States Tariff Commission issued a year ago under the title "Economic Analysis of the Foreign Trade of the United States in Relation to the Tariff." Copies of Mr. Field's memorandum, which will be helpful in following this report, may be obtained from the author (pp. 18, 10c.).

The General Welfare Tax League (309 East 34th Street, New York City) has published Bulletin No. 5, March, 1934, entitled "Uniformity Clauses Block Tax Progress" (pp. 12). Also "Fundamentals of a Model Tax System," by Professor Roy G. Blakey (pp. 5).

Henry Sotheran, Ltd., 43 Piccadilly, London, has issued a new *Catalogue of a Collection of Books, Pamphlets and Broadsides on Economics and Social Science during Three Centuries* (pp. 75).

The bookselling house of Gustav Fock (Schlossgasse 7-9, Leipzig C 1) announces the sale of the library of Professor Dr. Paul Mombert of Giessen. The library contains some 6,000 volumes.

The American Committee on Economic Policy has issued a pamphlet entitled *The Twelve-Inch Shelf: A Pocket Library of Economics*, prepared by John W. Herring and Ethel C. Phillips (112 East 19th Street, New York City, pp. 31, 25c.). This contains titles with brief annotations of books grouped as follows: what is the economic problem? the home problem, distribution problems within America; our concern in the world problem; proposed roads to stable prosperity; as the religious leader and the educator see it; hints for study groups, teachers and students who wish to go further.

The *American Historical Review* has published as its supplement to Vol. 39, April, 1934, a *List of Research Projects in History, Exclusive of Doctoral Dissertations, Now in Progress in the United States and the Dominion of Canada* (pp. 54).

The Department of Historical Research of the Carnegie Institution of Washington has issued a *List of Doctoral Dissertations in History Now in Progress at the Chief American Universities, December, 1933* (pp. 64).

The following members of the instructing staff at Northwestern University have been appointed as government administrative members of various code authorities: Fred E. Clark, Ernest H. Hahne, D. J. Duncan, Vanderveer Custis, James R. Hawkinson and Howard Berolzheimer. During the past year Earl D. Howard has served as an assistant deputy administrator.

In the March issue of the REVIEW, page 184, E. W. Burgess was given the wrong address. The address should appear as 123 South La Salle Street, Chicago, instead of the University of Chicago.

## *Appointments and Resignations*

Karl L. Anderson has resigned from his position as instructor in economics at Harvard University to become a member of the department of economics at Bryn Mawr.

R. S. Atwood, director of the Institute of Inter-American Affairs of the University of Florida, has been granted a leave of absence for the second semester of 1933-34. He is spending four months in Guatemala completing his geographic study of Mayan civilization, carried on in coöperation with the Carnegie Institution of Washington. He will return to the United States in August.

Ellsworth W. Bell is on leave of absence from the department of agricultural economics, Massachusetts State College, to aid in the establishment of regional dairy programs under the Agricultural Adjustment Administration.

James H. S. Bossard of the University of Pennsylvania has been appointed by Governor Gifford Pinchot to the Pennsylvania State Commission on Probation.

J. Douglas Brown has been reappointed director of the Industrial Relations Section at Princeton University with the rank of full professor.

Melvin G. de Chazeau, associate professor of commerce and business administration at the University of Virginia, has been granted a leave of absence for the academic year 1934-35 to engage in a research study of price and distribution problems under the Steel Code as associate professor of economic research at the University of Pittsburgh. This study is conducted in coöperation with the Brookings Institution of Washington, D.C.

J. M. Clark of Columbia University is engaged as a member of the research staff of the National Planning Board (under the Public Works Administration) for a study of the economics of planned public works.

Arthur G. Coons, dean of men and associate professor of economics at Occidental College, is spending the current academic year in Peiping, China, as holder of the Seeley G. Mudd Visiting Lectureship of the California College in China Foundation.

W. L. Crum of the department of economics, Harvard University, will offer courses in corporation finance and contemporary economic problems at Stanford University during the summer quarter.

Samuel J. Dennis, instructor in economics at Harvard University, has resigned from his position to work with the Central Statistics Board in Washington.

Arthur Stone Dewing, formerly of Harvard University, will give special lectures in the 1934 summer session of Northwestern University.

Russell Doubman of the University of Pennsylvania has been elected national treasurer of the American Marketing Society, and also a director of the Pennsylvania State League of Building and Loan Associations.

Ralph C. Epstein, acting chairman of the department of economics, University of Buffalo, is on leave of absence in Washington with the Committee on Government Statistics and Information Services. This committee is sponsored by the American Statistical Association and the Social Science Research Council.

Frank Whitson Fetter, assistant professor of economics at Princeton University, has been appointed to the faculty of Haverford College as associate professor of economics.

Michael T. Florinsky of Columbia University will spend the summer in Europe preparing a book on the political, economic and social conditions in the Saar Territory, which is to be published early in 1935 by the Macmillan Company.

Lewis A. Froman of the University of Buffalo is supervising the administration of the evening session in the absence of Dean Clarence S. Marsh.

Howard W. Gray, professor of accounting in the College of Business Administration of the University of Florida, has been granted a leave of absence for the second semester of 1933-34. In his place Dr. P. M. Green of the University of Illinois has been appointed acting professor of accounting.

Luther A. Harr has accepted an appointment as economic adviser and treasurer of the *New York Evening Post* and the *Philadelphia Record.* He will resign from the University of Pennsylvania at the end of the present term to devote all of his time to his new duties.

Jean Hayden, formerly an instructor in the economics department, is returning to Vassar College as instructor.

Solomon S. Huebner of the University of Pennsylvania has been appointed special expert in insurance to the United States Shipping Board Bureau of the Department of Commerce. He is to undertake a study of the marine in-

surance policy of the United States and of the reorganization of the insurance department of the Bureau.

Emory R. Johnson of the University of Pennsylvania, who resigned from the deanship of the Wharton School last summer, has been appointed professor emeritus and special lecturer in transportation.

Clarence S. Marsh of the School of Business Administration of the University of Buffalo has been granted leave of absence to serve as educational director of the Civilian Conservation Corps.

Margaret Myers has been appointed instructor at Vassar College.

Mabel Newcomer of Vassar College will be on leave of absence for the academic year.

Nilan Norris has been appointed an instructor at Vassar College.

Melchior Palyi, former economist for the Deutsche Bank und Discontogesellschaft, will give special lectures in the 1934 summer session of Northwestern University.

Elinor Pancoast of Goucher College is serving as chairman of the department of economics and sociology.

Fredlyn Ramsey, instructor at Vassar College, is leaving to pursue graduate study at the University of Chicago.

Elizabeth Redden, instructor of economics and sociology at Goucher College, has been granted a leave of absence for the year 1934-35 in order to permit her to accept a fellowship in sociology from the University of Chicago.

Roy L. Reierson of Northwestern University has been advanced to the rank of assistant professor of finance.

Thorsten Sellin of the University of Pennsylvania was elected a member of the Social Science Research Council for 1934-36 at the 1933 annual meeting of the American Sociological Society. He has also been appointed by the Governor of Pennsylvania a member of the recently organized State Probation Committee which is to study the problem of the reorganization of probation in Pennsylvania.

J. P. Shalloo of the University of Pennsylvania has been appointed secretary of the Governor's Commission on Special Policing in Industry. This is an investigating commission centering its attention upon the employment of deputy sheriffs by coal, iron and steel companies.

Newlin Smith, instructor in economics at the University of Buffalo from 1929 to 1931, and subsequently engaged in graduate work at Chicago and Columbia, was reappointed instructor at Buffalo for the second term of 1933-34.

Frank A. Southard, Jr., of the department of economics at Cornell University, will be absent on leave during most of 1934 to engage in a study of Canadian-American capital movements as a part of the Canadian-American

relations project which is being financed by the Carnegie Endowment for International Peace, under the editorship of Dr. James T. Shotwell.

George T. Starnes, associate professor of commerce and business administration at the University of Virginia, will give a course in American economic history during the summer at the University of Southern California.

George W. Stocking, professor of economics at the University of Texas, who has been on leave since last summer to work in Washington, has recently resigned his position with the Committee on Government Statistics and Information Services and has accepted membership on the Petroleum Labor Policy Board. He is also a member of the Consumers' Advisory Board of the National Recovery Administration.

Charles R. Whittlesey of Princeton University has been promoted to the rank of associate professor.

H. Parker Willis of Columbia University has just returned from a trip to England and the continent where he investigated the subject of central banking.